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REPRESENTING

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AT ITS ANNUAL SESSION HELD AT

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PRESIDENTIAL ADDRESS*

WILLIAM T. SHARPLESS, M.D.
WEST CHESTER, PA.

It is a fine old custom, sanctioned and dignified by eighty years of observance, which prescribes that the president of this Society on taking office shall make an address, in the words of the By-Laws, "on such matters as he may deem of importance to this Society." The character of the address varies with the special interests of the president or with the urgency of the matters claiming the consideration of the members of the Society at the time. In the past some of these addresses have been purely hortatory, treating of the standards and practices of physicians, others dealt with professional subjects, others were historical and given to a consideration of the long and interesting history of the Society and its accomplishments in the past, while others dealt with administrative matters and with the present aims and purposes of the Society.

The Constitution of our Society, in explaining the purposes of the organization, states that these purposes are "to extend medical knowledge and advance medical science; to elevate the standard of medical education; to secure the enactment of just medical laws," etc. "So that," it goes on to say, "the profession shall become more useful to the public in the prevention and management of disease and in prolonging and adding to the comfort of human life." It is apparent from this that the original purpose of the Society was not so much to promote our own interests as to benefit the public—and this high standard we should always keep in mind.

There are many questions now before the Society any one of which might claim sufficient consideration to occupy the whole of this address. May I mention briefly a few of them?

The establishment of the Woman's Auxiliary to this Society has proved to be a valuable addition to the efficiency of the organization. It has increased the interest of the members, and has materially augmented attendance at the meetings both of the State and the county societies. It has advertised the purposes of the Society, and aided in its legislative work. We shall welcome a further extension of its valued coöperation.

The suggestion made by the Board of Trustees and presented to the Society at its last annual meeting that the assessment of the members be increased fifty per cent has been accepted with but slight opposition and without diminution of the total membership. This increase of revenue places the Society in a position to carry on its legislative program and other work more efficiently, to assume a larger share of the expense of the annual meeting, which has increased greatly in recent years, to add to the funds for medical defense, and to aid those of the membership who through misfortune or ill health are unable to support themselves and their families. This last proposition is one that makes a very strong and intimate appeal to the generosity of physicians everywhere, and our members are urged to keep this humane feature of our work in mind, and to add to it as their means permit.

Many criticisms have come to the Society's officers of the work of the Board of Medical Education and Licensure. These complaints suggest that in its composition and in its organization it does not properly represent the judgment of a majority of our members. They indicate that in its interpretation of the regulations under which it operates it excludes from practice in this State many highly qualified candidates while it licenses some less desirable men. In its standardization of hospitals for interns, its work appears helpful in the main, but some of its requirements are unreasonable and operate to the disadvantage of patients and of hospitals. The whole system of licensure needs to be reorganized.

The most outstanding work of the Society during the past year has been done in connection with this question of licensure. The Committee on Public Health Legislation under the efficient chairmanship of Dr. Paul R. Correll has prevented the passage or even the consideration by the Legislature of the pernicious Chiropractic Bill prepared by the so-called Freeman Commission which would license a great number of imperfectly qualified men and women to practice upon an undiscriminating public. The thanks of this Society and of the people of the State are

* Delivered before the General Meeting of the Medical Society of the State of Pennsylvania, Erie Session, October 1, 1929.

due to the members of this committee for their efficient and self-sacrificing labors. The campaign has done more than accomplish its primary purpose. There are certain incidental results quite as important as the original purpose. It has developed an esprit de corps and has united our members behind a worthy purpose. It has stimulated the latent loyalty of our members to the high ideals of the Society. It has given us intelligent and efficient leadership. It has shown us the influence we possess in shaping legislation, and has raised our hopes for better things in the future.

In this connection, it may be stated that nothing is ever permanently settled in this world until it is settled justly, and while there is more than one board to pass upon the qualification of candidates to practice medicine in this State, of whatever school or cult, the matter is not settled in a way that is just to the candidates or to the people of the State.

A knowledge of certain subjects is essential for the intelligent practice of any branch of the healing art. These subjects are anatomy, physiology, and pathology, the latter including bacteriology and medical chemistry. In some states applicants are examined in diagnosis and hygiene as well. These branches, of course, are essential for practice but are not strictly speaking basic sciences.

Seven states now have a basic-science law and the number of such states is increasing. The provisions of the law vary somewhat in the different states, but in all the same examination in the basic sciences by the same board is required of all candidates for a license. If these examinations are satisfactory, the applicant is then examined by representatives of the school or cult in which he wishes to practice.

This examination in the basic sciences, if thoroughly, intelligently, and impartially administered, at least excludes applicants ignorant of the essentials of the science of medicine—a great gain as shown by the results in the states where it is in operation.

For instance, Mr. J. G. Crownhart, secretary of the State Medical Society of Wisconsin, writes "Some one or two chiropractors have entered the State since 1925" (the date of the adoption of the Wisconsin law) "and these were men who had had one or two years of medical training. Comparing this to our estimate of two hundred chiropractors entering this State each year prior to the adoption of the law we are well satisfied with its operation."

Such testimony might be multiplied almost indefinitely by quoting from letters received from secretaries of state medical societies in those states where a basic-science law is in force. Probably no one will question the right of Dr. W. C. Woodward, director of the Bureau of Legal Medicine and Legislation of the American Medical Association, to speak on this subject. He says: "No state that has enacted a basic-science law has ever repealed it. So far as I am informed, no state that has enacted such a law ever even considered modifications changing the underlying principles of it. Reports of the operations of such laws from states in which they are in practice seem to have been uniformly satisfactory. The bitter opposition of the several cults to basic-science laws is a tribute to their efficiency in barring incompetent cult practitioners from plying their trades."

He continues "On the other hand, there is a considerable opposition to basic-science laws among persons residing in states where they are not in force, who have had no experience in the execution and enforcement of such laws, and whose study of them and their accomplishments seems to have been more or less superficial. I have never been able to fathom the underlying causes of that attitude."

We do not wish at this time to urge the passage of a basic-science law in Pennsylvania. The time may not be propitious. We defer to the judgment of the Public Health Legislative Committee that the present Medical Practice Act, if amended and enforced, would cover most of the inequalities in licensing physicians for practice in this State. We cannot, however, continue simply to oppose vicious legislation. We must take the aggressive and place before the people of the State a just and comprehensive measure that will include under one standard all the applicants to practice any branch of the healing art, and we must see to it that this law is enforced. This is the only practicable method to settle the matter permanently and prevent the constant recurrence of the preposterous demands of the cults. In every state where two or more examining boards exist and set up different standards of medical education, this ideal has not been attained.

It is quite a frequent occurrence that members of this Society, organizations of physicians, or others interested in the public health believe that laws governing medical matters need to be changed or that new laws are required. May we suggest that the surest way to get results is to bring the question into the House of Delegates of this Society. Then, if approved by the Reference Committee and the House of Delegates, it is placed in the hands of the Board of Trustees. This Board, after determining that the proposed measure does not conflict with the Con-

stitution of the State or with previous enactments of the Legislature and that the wording of the act is clear and fully covers the points involved, in coöperation with the Legislative Committee of the Society can usually get a favorable hearing. The method too often used is to take the question directly to the Legislature and afterwards endeavor to get the endorsement of the State Society. Many good measures have failed because the proper approach to the Legislature is not made.

There was a time many years ago when the general medical profession felt its responsibility for the health of the public. If we read the minutes of any medical society of seventy-five or a hundred years ago we will find that they had a very live interest in the causation of disease and in its prevention. They did not attack the problem as we do now by purifying drink and food, by proper sewage disposal, and by immunization (except in the case of smallpox), but they had a great deal to say about prevailing winds, ground water, the constituents of the soil, etc., and the effects of these agencies in causing disease. The point is that they recognized the fact that they should be the guardians of the public health.

With the great development of our knowledge of the cause and cure of disease which has occurred in the past seventy-five years, interest has drifted toward curative medicine and away from preventive medicine until now it is often said that physicians are not interested in disease prevention. Because of this state of affairs many voluntary as well as official health organizations have grown up and have taken up the work that the medical profession has in part laid down. What should be the attitude of the profession toward these organizations, many of which are directed by lay men and women?

Toward the official health organizations, that is, boards of health and other agencies set up by the State Department of Health, there can be but one answer: we owe to them an earnest and loyal support. Vital statistics, the determination as to the increase or diminution of disease, knowledge concerning the results of official procedures, all depend upon the coöperation of practicing physicians with the State Health Department, and full information should be given freely as part of the contribution of the profession to the administrative control of disease.

Toward the unofficial or voluntary health organization we also have a duty. Our profession cannot afford to withhold its support from any intelligent and earnest body of people working for the public good. To do otherwise would open us to the charge of insincerity when we claim that we are the only profession trying to do away with the condition by which we live—namely, disease. The work which these lay organizations are trying to do is essentially medical work. It belongs to medicine and it needs the direction that physicians can best give. There should be no antagonism between the two. They can supply the enthusiasm and the administrative knowledge, which many of them have been taught. The medical profession can furnish the medical knowledge that is essential to the efficient working of the whole plan. We can work together in promoting immunization against disease, in establishing and conducting public-health clinics where prenatal care can be given, where mothers may be taught how to rear their babies, and how best to guide them through childhood and adolescence, where periodic health examinations can be made to detect the beginnings of disease and disability, and so a nation of healthy and physically efficient men and women may be reared to carry our country on to its great destinies.

Many minds are haunted by the specter of state medicine in such a program, and others believe it would take away the revenue that the physicians receive. This is usually answered by the statement that the quite extensive application of these methods has not affected the physician's revenue; in fact never before, at least in modern times, has the practice of medicine been so good a business as it is today, and we need not fear that well-qualified men who are willing to live simply and work hard (and these conditions are good for all of us) will suffer for want of adequate compensation. If the plan outlined and urged by sanitarians and philanthropists alike will result in improved health to our nation, medicine will have to adjust itself to the change. Many factors, however, enter into this problem which cannot be discussed here. They receive a full consideration in an excellent article published in the *Proceedings of the College of Physicians of Philadelphia* for this year by Dr. Allen W. Freeman, of Baltimore, to which all who are interested are referred.

The next question to be considered is claiming the attention of two great professions, law and medicine, and on account of the great difference of opinion concerning it, it is approached with much hesitation. It is that of medical expert testimony. As medicine has become more specialized the demand for expert evidence has increased, and in most states there is no control exercised over it either in law or medicine. A class has grown up known as "professional medical experts." There is no good reason why physicians should not qualify to be experts in legal

medicine. It is a legitimate and proper field, and many of these are men of proper professional training, ample experience, and irreproachable character.

There is another class of men, however, who pose as experts, who for the most part have insufficient knowledge, no connection with reputable medical societies, whose evidence is for sale to the highest bidder, who are said to accept a contingent fee, and who carry on their trade with lawyers as unscrupulous as themselves. They are employed, as a lawyer would be, to advocate the interests of those who employ them. These bring discredit on both law and medicine and often defeat the ends of justice, as the jury cannot judge of the value of their evidence and the court permits them to testify as experts. Both lawyers and physicians recognize the existence of this class and deplore the results of their pernicious activity. The lawyers claim that these men should be disciplined by the medical organizations. The physicians reply that for the most part, not being members of medical societies, they cannot be reached, and that the court and opposing lawyers should know and expose the misleading and mischievous character of their testimony and thus discredit its effects upon the jury.

Bad as this is, there is a still worse phase of medical expert testimony, worse because it is often offered in cases that attract more attention than the pettifogging methods practiced in the cases above mentioned. It is thus described by Dr. L. Vernon Briggs, author of the so-called "Briggs Law" of Massachusetts, which is now in force in that State. In speaking of the condition existing in Massachusetts before the passage of the law, he says: "Hardly a day passed, and certainly never a week, without the spectacle in some one of our courts of two or more physicians, possibly graduates of the same medical school, and belonging to the same scientific and medical societies, pitted against each other, testifying to diametrically opposite opinions as to the mental condition and responsibility of the person in question.

"The press seized upon this condition of affairs to subject the psychiatric specialist to ridicule. A jury, often with some members of very low mental caliber, sat as judges to decide complicated medical questions, frequently involving the life of a human being. Often the conflicting testimony of two eminent psychiatrists so confused the jury that they threw out all the medical evidence. Seldom did they get an unbiased scientific opinion, for no sooner had one side employed an expert in mental disease than the other invariably engaged another alienist, of whom there were plenty to be found, who could be employed to offset their rival's testimony.

"For years it had been the desire of the medical men in our State to remove from their profession the stigma occasioned by the acts of these few men—for my criticism of expert testimony does not apply to the great majority of physicians who refuse to be employed in any case where they are not permitted to express their honest scientific opinion. As expert for many years on important murder and will cases in our courts, I had seen the expense to which the State was being put for the employment of alienists as well as the expense to the family of the accused, which frequently they could ill afford.

"Then, to me as to many others, the humanitarian aspect was really the most important factor, especially when the accused was mentally distraught and was obliged to listen to the testimony of the experts concerning delusions, hallucinations, etc., day after day, before it was decided by a jury of laymen whether he was mentally ill or not. On the one hand, the contentious method which has been used in the past in Massachusetts, and is today being utilized in other jurisdictions, opened the door to the possible execution of mentally ill persons; on the other, this same contentious practice made it equally easy for persons acquitted because of 'insanity' to be shortly thereafter returned to society, although dangerous."

This is the condition now existing in many of the states of the Union. There can be very little doubt that our penal institutions contain a large number of mental defectives.

Dr. William T. Root, of Pittsburgh, reports that after a careful study of the mental condition of the inmates of the Western Penitentiary in this State, he finds nearly 60 per cent of these to be imbeciles or morons; that is, of a mental age of eleven years or less. The report says that "they simply lacked the intelligence to direct their movements in conformity with the demands of society." Is it fair to class these men and women as criminals, and assign to them definite terms of confinement? Society needs to be always protected against these. At Huntingdon, out of 523 examined it was found that there were 306 imbeciles or morons; and at Muncy, out of 142 women there were 79 in that class. Other institutions show similar conditions. It is well to have these inmates of penal institutions examined, but it is better to have such examination made before they are sentenced so that they may be assigned to the proper institution.

To remedy the admitted evils now connected with medical expert testimony, a great many plans have been suggested and the subject has

been given attention by the best minds in the legal and medical professions.

At the meeting of the American Medical Association at Dallas in 1926 a committee was appointed to prepare a comprehensive plan dealing with this subject. Such a plan was prepared in outline by Dr. W. C. Woodward, of the Bureau of Legal Medicine and Legislation of the American Medical Association, and submitted to the representative of the law serving on that committee. He made some comments upon it, and there the matter was dropped except that Mr. Lloyd Paul Stryker, the legal adviser of the New York State Medical Society, commented very unfavorably on some of its provisions at a meeting of the Tristate Medical Conference, whereupon Dr. Woodward retorted that Mr. Stryker had not given the subject sufficient study. There the matter rests.

Besides medical and legal societies, many civic associations are working on this subject and many individuals who are frequently employed as medical experts have given their views. Some have suggested that there should be two trials of those for whom the claim of insanity is made —one to determine whether the accused is guilty of the act and another to determine his mental responsibility. Others propose that the judge should appoint the experts. Numerous objections have been raised to this plan, and in Wisconsin a similar plan has been declared unconstitutional on the curious ground that testimony believed to be impartial and not selected by either party would have so much weight with the jury that any evidence submitted by said parties would have very little effect with that body, and that consequently the rights of the accused would not be given full consideration. This may be good law in Wisconsin, but it sounds strange to people trying to arrive at the truth.

Others believe that no remedy exists except the moral education of the public and of the medical profession, the profession to give truthful and competent testimony, and the public to recognize it. This is too slow a method for an age that is looking for quick results.

One professor of mental diseases in one of our best-known medical schools states that in his opinion all murderers should be executed, whether sane or insane, and intimates that if that were done the question of insanity and of medical expert testimony would not come into these cases at all.

Dr. Osler used to tell us that when a great many remedies are proposed for a disease none of them is of much use, and perhaps it is so with regard to expert testimony. Two states, however, seem to have reached a solution satisfactory to themselves, Maine and Massachusetts, and the important point in the laws of both states is that the accused person is placed in an institution where he may be studied as long as necessary by psychiatrists appointed by the state before his trial. It is said that in both states the testimony of these psychiatrists is generally accepted as final at the trial by both the prosecutor and the defense, though either is at liberty to present other expert testimony. The details of these laws are very simple. In Maine only those in whose defense insanity is claimed are detained and examined, and the opinion is given by the superintendent of the institution in which the person was detained. In Massachusetts not only those claiming insanity but all habitual offenders and those accused of capital offenses are detained and examined by representatives of the Department of Mental Diseases of the State. If the accused person is found to be insane the case does not come to trial by jury but is disposed of by the court, and thus expense, notoriety, and distress to the accused person are avoided.

Pennsylvania has made a feeble start along these lines in the study of the inmates of our penal institutions and in authorizing an institution in the Cumberland Valley for the care of the defective delinquents. A board of managers has been appointed for this institution, and a small appropriation for its establishment was made by the last Legislature.

Last year the Tristate Medical Conference composed of the officers of the State Medical Societies of New York, New Jersey, and Pennsylvania authorized the appointment of a special committee to consider the problem of expert testimony and to draft legislation of a uniform character for these three states. This report is anticipated with much interest, and will probably be of such a character as will claim the support of this Society.

Leaving now the consideration of public policy and of administrative reform, may I speak briefly of a matter of more personal interest and one that affects very closely the social life and the professional efficiency of the physician? I refer to his recreations. It is a matter that every physician must settle for himself how he shall employ his leisure time and how he shall get the change from professional work that every physician needs. There are more varieties of pastimes now than were known to our grandfathers. Automobiling was of course unknown to them, golf and tennis almost equally so, and travel was so slow and accompanied by so many inconveniences that it was very little followed. There are but few pastimes that have held the interest of physicians through the generations.

The study of the natural sciences, botany, geology, and mineralogy, etc., is scarcely cultivated at all by practicing physicians in these days, though seventy-five or a hundred years ago it was popular, and in my native county of Chester the natural history of the region has been studied and written about almost exclusively by doctors, and very valuable contributions to knowledge have been made by them. It would well repay our study now, and would furnish an interest that would last into old age.

As a physician grows older he is obliged to give up the more active forms of diversion, and if he is wise he will so restrict his practice that he will have more leisure time. If he has not cultivated some interest outside of his profession, if he has persistently "scorned delights and lived laborious days" he is of all men most miserable. The practice of medicine is a very satisfying life. It meets the social requirements of man. It affords a field for the exercise of his scientific interests and an outlet for his humanitarian impulses. Like virtue it is its own reward.

"The sick man served by thee shall make thee strong;
The poor man helped by thee shall make thee rich;
Thou shalt be served thyself by every sense
Of service which thou renderest."

But while it has these great rewards, I need not remind you that it has great responsibilities.

May I suggest as an escape from these responsibilities that during the more productive period of his practice the physician surround himself with a library of good books. This advice is so common that it has become trite, but it is still needed. If he has a hobby, books concerning it should be acquired. If he enjoys general literature, an investment of a few dollars or a few hundred dollars a year will in a short time give him most of the English or other classics. In recent times many physicians have taken up the study of that most fascinating subject, medical history, and books and journals are now available concerning it. The wisdom of the patriarchal Hippocrates, the patient and scientific spirit of Galen, the teachings of that saintly Hebrew, Rabbi Moses Maimonides, the antics of the brilliant but erratic Paracelsus, the transcendent services and the tragic death of Vesalius, the still more tragic death of Servetus, the work of Paré, of Harvey, of Sydenham, of Boorhaave, of Laënnec, of Lister, of Osler, and of many more and all that they did—is it not written in the book of the chronicles of the men of medicine? Dr. Osler says that the oath of Hippocrates is the high-water mark of medical ethics. There is a passage in this oath which expresses with singular beauty and lofty idealism the reverent attitude of the man of medicine: "With purity and with holiness will I pass my life and practice my art." This resolution transcends all rules of behavior and all codes of ethics. It makes them superfluous. It covers the whole ethical field. It should be engraved upon the heart and written upon the mind of every physician. "With purity and with holiness will I pass my life and practice my art."

HEREDITY IN MALIGNANT DISEASE*

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This is a subject fraught with such difficulty as to make a scientific discussion almost out of the question. The actual facts at our command are so few and susceptible of interpretation in so many ways that many are inclined to disregard them or to look upon them with suspicion.

The facts divide themselves into two groups: those that have to do with malignant disease in animals, especially mice, and those that have to do with malignant disease as we see it in human beings. The former, which may embrace many generations of carefully bred animals, are capable of almost every kind of experimental genetic manipulation and are really scientific; the latter consist of family histories given by patients whose information is usually defective, and whose knowledge rarely extends beyond three generations, and are frequently impossible of verification and outside the realm of experimentation.

Opinions differ with regard to the justifiability of applying to man any deductions made from studies upon mice—man is not a mouse. But inasmuch as both mice and men are susceptible to much the same kinds of tumors, it seems probable that in both animals the same general facts apply.

Could it be shown that what is true of mice is equally true of rats, guinea pigs, rabbits, cats, dogs, monkeys, etc., then the facts would be so broadened in their applicability as to make almost certain their bearing upon mankind. But unfortunately the other animals mentioned are so rarely subject to spontaneous malignant tumors as to make impossible such great collective investigations as have been made upon mice.

The problem of tumor inheritance with regard to men is at present very much as it was with regard to mice a quarter of a century ago. About that time success in the transplanation of tumor tissues was achieved by Hanau, Loeb, Jensen, Flexner and Jobling, and others, and laboratory

* From the McManes Laboratory of Pathology of the University of Pennsylvania.

workers everywhere were stimulated to investigate along similar lines with such modifications as their varied imaginations suggested.

But the first difficulty was to find a mouse with a spontaneous cancer with which to begin the experiments. Before that time a healthy white mouse was worth ten or fifteen cents, and one with a cancer, being diseased, had no value at all. But with this sudden interest in cancer transplantation and investigation, there was a sudden demand for cancer mice that caused the value of those rare and unfortunate animals to increase until some mice with spontaneous tumors were sold for as much as ten dollars apiece.

At that time it was supposed that the mouse tumors occurred "spontaneously," which meant, for no particular reason, here, there, or anywhere. No one seemed to suspect that inheritance played any part in the matter, or if he did, and said so, he was looked upon as lacking sound judgment.

There were at that time many dealers in laboratory animals and white mice whose stocks failed to yield a single cancer mouse, others yielded only an occasional tumor, while a particular dealer near Boston—Abbie Kingsley, I think her name was—was able to supply a surprising number. Why did her mice have cancer more frequently than others? Was it because of some infection? Had it anything to do with the diet upon which they were fed? Could it be inheritance?

These questions were earnestly debated, but the stock continued to supply the coveted tumor mice. Let it be noted that at that time opinions regarding the occurrence of cancers in mice were precisely what they are at the present time regarding the occurrence of cancers in men. Cancers were never observed in the mice of certain breeders, just as cancers never occur in certain human families; they appeared occasionally among those of other breeders, just as they occur among most human families; and they occurred in considerable numbers among those of one particular breeder, just as some human families are "cancer families," for no known reason.

Now let it be noted that had the animals bearing these cancers been elephants or camels or perhaps even horses, whose numbers are relatively few, whose values are relatively great, and whose ages are a quarter of a century or more in length, no further information as to the occurrence of the cancers might yet be forthcoming, and we should still be as uncertain of the facts in regard to mouse cancer as we are today in regard to human cancer.

But fortunately the animals were white mice, cheap to buy, so small as to take up little space, docile to handle, easy to care for, ready to breed, productive of large families that arrive at maturity in a few months and grow old in three or four years—fortuitous circumstances permitting the selective breeding of great numbers.

In cancer-research laboratories the question of the inheritance of tumors in mice has now been under investigation for about twenty years. Bashford and Murray, Tyzzer, and others first showed that spontaneous malignant tumors appeared more frequently in the descendants of tumor mice than in those of nontumor mice, and that they could be made to appear much more frequently by selected breeding.

The most interesting and most elaborate investigation upon the subject is that conducted in Chicago by Dr. Maude Slye, whose careful selective breeding of mice has been on a scale that has yielded 30,000 necropsies, with the discovery of 4,000 spontaneous primary tumors. Slye has succeeded in developing "strains," or families, of mice, in one of which no tumors now appear while in the other they appear in about 100 per cent of the animals that live long enough.

Similar strains of mice yielding 100 per cent of malignant tumors have been produced by Strong of Ann Arbor, and by others, so that there can be no doubt whatever that when cancer mice are bred with cancer mice the incidence of spontaneous tumors is increased until practically every animal old enough develops them.

The only point upon which there can be any dispute regarding Slye's work is that having to do with the type of the inheritance. She claims that it occurs as a "simple Mendelian recessive," upon which she has been assailed by Little of Ann Arbor, Strong, Wood, and others who find the mechanism of inheritance so complicated by various linkages as to make the simple Mendelian-recessive phenomenon impossible.

But to pursue this further would lead to a discussion of the homozygotes and heterozygotes of dominants and recessives and the mechanistic details of the inheritance, all of which is beyond the scope of these remarks.

Understand that no one has yet explained the original occurrence of cancer nor found out what causes the disease, but it is now recognized as a fact that once spontaneous cancer occurs in a mouse, the descendants of that mouse are susceptible to it in proportion to the intensity with which the heritable factor is concentrated in its descendants by mating with other cancer mice, until every member of the family will become cancerous provided that it does not succumb to accident, infection, or some other disease before it is more than a year old, the age before which cancer rarely develops and after which, for the

members of these families, there is practically no escape from it.

When we turn from mice to men, difficulties are encountered that make the problem of the inheritance of malignant disease so difficult that few regard it as a promising field of research. Not much attention is, or has been, devoted to it, therefore, and any conclusions arrived at are more apt to represent unfounded judgments than to be based upon facts educed by either careful observation or experiment.

There is, then, divided opinion upon the subject. Some, mostly clinicians, profoundly interested in all phases of the "cancer problem," boldly express the opinion that cancer is not an inherited disease, while others, mostly investigators and experimentalists, as boldly assert that it is.

But what are the data to be considered? It is a common observation that cancers very frequently appear "spontaneously" in families whose other members are free from it, and whose recollections of their ancestors fail to furnish any cases from whom it might be inherited; it is frequently remarked that a number of members of the same family suffer from cancer and die of it; and an occasional family comes under observation in which cancer afflicts many members in every generation. The first two conditions are not of value in proving or disproving inheritance, but the third is so impressive as to leave no doubt in the minds of those who know about inheritance in mice, and to arouse interest in the thoughts of those who do not.

Here, very briefly outlined, is the latest family of the kind that has come under my own observation:

Dr. W. L. M., a strong, intelligent man, had a wen or sebaceous cyst on the shoulder. It is said that caustics were applied to this for a time, and that later it developed into a *skin cancer*.

This man married twice. The second wife had two children. The first, a daughter, died of pulmonary tuberculosis at 19 and left no descendants. The second, also a daughter, never married and is now an old woman, living and well at present.

The first wife had nine children. Let them be considered individually:

(1) Daughter died in childhood of some diarrheal affection.

(2) Daughter died at 5 years of *sarcoma* of the face.

(3) Daughter, unmarried, died at 40 of pneumonia.

(4) Daughter, unmarried, living and well at 90.

(5) Daughter living, with a *cancer* of the lip.

(6) Daughter died at 45, of *cancer* of the uterus. She had a daughter who died at 35 of *cancer* of the uterus.

(7) Son died at 72 of heart disease, but among his children was one daughter who has been operated upon for a *breast tumor*.

(8) Son died suddenly at 42, of heart disease. Among his children was a daughter who died of an obscure intestinal trouble, perhaps *cancer*, and also another daughter who died of *cancer* of the uterus.

(9) Son died at 58 of *cancer* of the colon. He had three sons. The first died at 28, of *cancer* of the colon. The second died at 49, of *cancer* of the colon. The third was operated upon some years ago and a *gelatinous carcinoma* of the cecum was removed.

Thus in three generations of this family there have been ten cases of malignant tumors, and two others that may have been such.

This remarkable family does not stand alone. Professor Aldred Scott Warthin, of the University of Michigan, has a large collection of similar tumor families. A single family history might mean but little; many such cannot be overlooked. Contrast these with Professor Warthin's own family in which he says there have been 65,000 known descendants, of whom 6,000 are now living in the United States, and in this great family there have been scarcely any cases of malignant disease.

It may occur to some that in the family whose tumor history was given above there were various kinds of tumors. The grandfather and a daughter had skin cancers; the child of five died of sarcoma of the face; two daughters and a granddaughter died of cancer of the uterus; four members, a son and three grandsons, had carcinoma of the colon; and a granddaughter was operated upon for "some kind of tumor of the breast." So the question may be asked, if the tumors were hereditary, ought they not be of the same kind?

I think not. Tumors are disturbances of growth characterized by riotous proliferation of tissue cells. If the cells are capable of maturation and differentiation, any growth that happens may mature and differentiate, with a resulting benign tumor; if the cells do not mature and differentiate, the tumor will be malignant. In either case it is the overgrowth that determines the tumor, and that which is inherited is certainly not the tumor itself, but an abnormal susceptibility to growth that may manifest itself wherever appropriate conditions or the necessary stimuli occur. The more this tendency to overgrowth is concentrated and intensified by heredity, the easier becomes the formation of tumors, until it asserts itself as a regular event (as in Slye's mice) appearing at a certain time, not at one, but frequently at several places simultaneously, and for no other reason that can be determined than the general tendency of the tissues to behave in this manner. If it occurs in epithelium, some or any variety of carcinoma results; if in the connective tissues, some variety of sarcoma results.

It is, perhaps, unfortunate that in our endeavors to be taxonomically as correct as possible, we

have overemphasized the histologic differences between tumors. For the purposes of the present discussion it would be well to be all-inclusive and think only of malignant tumors—or indeed of tumors in general—without reference to any particular kind or kinds of tumor.

From this it seems that in spite of the frequently repeated and no doubt well-meant assertion that "cancer is not hereditary," there is much reason to believe that it is.

It is extremely difficult to obtain family histories of much value in most tumor cases. People, in general, do not bother themselves about the medical histories of their antecedents. There is also a desire to have it forgotten that certain members were criminals, insane, feeble-minded, or cancerous. Many long pedigrees point with pride to all of the judges, professors, artists, bankers, congressmen, etc., in the family, while leaving out the obscure and unfortunate members altogether.

But as medical science becomes more and more social in its purposes, it seems as though the time must come when at centralized bureaus there will be complete medical histories of all individuals, so that without having to rely upon the uncertain recollections of the patients as to the maladies of their antecedents, it will be possible to find out authoritatively all about each individual and his antecedents and thus establish lines of diabetes, tumors, feeble-mindedness, epilepsy, and so on through all of the heritable and probably heritable maladies to which flesh is heir, with the purpose of assisting future generations to avoid matings that will tend to the concentration in their descendants of factors leading to unhappiness and suffering.

I was surprised to read in the latest edition of Ewing's *Neoplastic Diseases*, a quotation from LeDoux-Le Bard: "Nothing authorizes us to affirm that cancer is hereditary; in the interests of the public this doctrine ought to be combated."

I believe that to be wrong. The person belonging to a cancer family should know that he may inherit something that may eventuate in cancer, and be taught to watch for the first possible indication of its beginning in order that the malignant growth may be removed or destroyed at its first appearance and in its earliest stages. That ought to be an important part of the information we are to lay before the public.

Members of cancer families should be warned against marrying into cancer families. There is nothing new, radical, or objectional in that. Is not the same done with respect to imbecility, insanity, epilepsy, and diabetes?

With the great human family as mixed as we find it, and with more or less tumor inheritance disseminated in most families, it is scarcely to be hoped that we shall ever be able to segregate and eliminate the evil, but with the final outcome we have no more to do than with the destiny of mankind in general. What we have to do, however, is to use such knowledge as we are able to gather for effecting as great an improvement in existing conditions as is possible, and there our responsibility ends.

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SURGERY OF THE GALL BLADDER*

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Surgery of the gall bladder today constitutes one of the most frequent appeals to the general abdominal surgeon, and should be considered under two general types of operation—cholecystostomy and cholecystectomy. Without an apology, I shall dismiss the subject of cholecystostomy with a merited but brief set of arguments.

Cholecystostomy

I do not do a cholecystostomy except in the event of a definite obstruction or suspected carcinoma obstructing the flow of bile into the intestine. For cholecystostomy to be efficacious in such a condition, the obstruction must be below the junction of the cystic and hepatic ducts, as these two enter into the formation of the common duct. Obstruction above this point will not be benefited by a cholecystostomy.

I do not do cholecystostomy in acute cholecystitis except in the rarest of instances, such as cases of extremely ill patients whose physical condition would permit of nothing but local anesthesia, and I am quite positive that this type of case occurs in my clinic and practice in less than half of one per cent of all my gall-bladder operations.

Nor do I do a cholecystostomy as a preliminary stage, fearing to do a radical operation because of the factor of infection. I found years ago that those patients with purulent or gangrenous gall bladders do far better with a primary cholecystectomy than with a cholecystostomy to be followed by a second surgical trauma; also that the removal of the infected area is followed by a very short and sharp convalescence.

Furthermore, an acutely affected gall bladder has been prepared for early removal by the very process of inflammation. The walls become edematous, and a rapid finger dissection is made after the serosa is incised. This type of gall

* Read at a meeting of the Second Councilor District of the Medical Society of the State of Pennsylvania at Valley Forge.

bladder lends itself to a spectacular delivery, due to the facility with which the peritoneal and muscular coats may be stripped from the submucosa and mucosa.

My indications for cholecystostomy, as mentioned before, are definite malignancy or suspected malignancy, and inoperable obstruction to the outflow of bile situated below the cystic duct. Besides being due to malignancy, the obstruction may be a stenosis from scar or fibrous tissue; it may be an unrecognized and nondislodgeable stone in the pancreatic portion of the duct, or it may be due to pancreatitis, producing sufficient pressure on the duct to obstruct it. The most frequent cause of duct obstruction distal to the cystic duct is carcinoma of the papilla of Vater or carcinoma of the pancreas.

In any of these types of obstruction, cholecystostomy, either permanent or temporary, is indicated. In preference to the classic cholecystostomy in this condition, I am advising and doing that operation which makes a permanent byway between the duodenum or stomach and the gall bladder; i. e., cholecystoduodenostomy or cholecystogastrostomy, and giving preference to the latter. This preference is not based on physiologic reasons, but upon the surgical facility plus the experience gained in doing the operation many times, and finding that there is no gastric irritation following, nor any apparent deviation in the physiology of digestion.

The surgical facility is demonstrable as soon as the abdomen is opened. The pyloric antrum of the stomach is in view, and well within operable reach without the necessary trauma demanded by mobilization of the duodenum for anastomosis. Again, the fundus of the dilated gall bladder lies over or on the stomach, while in the operation of cholecystoduodenostomy the fundus must be buried well down in the abdominal cavity.

Bear in mind that, in this type of obstruction to the outflow of bile, in over eighty per cent of the cases there is a well-dilated, noninflamed gall bladder, Courvoisier's law being well carried out. With obstruction above the terminal portion of the cystic duct, in which cases this type of operation is not indicated, there is, as a rule, a small, atrophied, or contracted gall bladder. This latter type of gall bladder is also found in the fluctuating obstructions due to stone in the common duct. Therefore, upon opening the abdomen (if no enlargement has been palpated before operation and the gall bladder is found large and noninflamed), search should be made for the obstruction distal to the junction of the cystic and hepatic ducts. If the gall bladder is found to be small (empty or partially so, contracted, or atrophied), search should be made above the cystic duct, in the absence of a stone in the common duct. In the event of an acute pancreatitis, with edema of the entire neighborhood, then a cholecystostomy not only may but should be performed.

To summarize: Cholecystostomy is done only when (a) there is a definite use of the gall bladder as a means of making a byway, or (b) as a means of drainage, as in a case of pancreatitis associated with edema that masks or makes impossible the diagnosis of the immediate obstruction. The objection on my part, and on that of the greater number of operators, to doing cholecystostomy in the nonmalignant obstruction and inflamed gall bladder is that the tour of illness is longer than in an "ectomy," the morbidity being more positive and more prolonged. The recurrence of infection, etc., is positive in a fair percentage of all patients so treated.

Cholecystostomy is done by the Khader method of suturing a tube in any hollow viscus. Preliminary to suturing the tube into the opening made in the gall bladder, measure the length of the cavity by introducing the tube to the bottom of the gall bladder, then withdrawing it one third to one half of the length introduced. Sew the edge of the cut gall bladder with one stitch through the tube, finish closing the opening, and then place in a purse-string suture one-fourth to one-half inch below the opening, and plunge the sewed-in tube down, which will carry the fundus inward. As the fundus disappears, draw the purse-string suture and tie it. Never sew the gall bladder to the parietal peritoneum, as this assists in producing some of the dragging complained of years ago by cholecystostomy patients.

Postoperative Complications. A persistent sinus is a relatively frequent occurrence and demands a second operation, the dread of which has caused patients to endure untold sufferings for months and years. During the first half of 1927 I operated upon several of these sinuses, and invariably found one or more stones to be the cause. In this series one patient carried her sinus sixteen years, one large stone being delivered with the "ectomy." She had been operated upon at the age of seventeen. The second patient carried his sinus six years, one large stone being delivered with the "ectomy." From the third, whose sinus duration was nine years, several small stones and one large one were removed. In one male twelve years old, at the secondary operation a contracted gall bladder was found, filled with calculi the size of millet seed. In this class of patients, the sinus is not discharging continually, but intermittently. The gall bladder fills with mucus (usually) or mucus

and bile, thereby producing distress, etc., the closed mouth of the sinus opens, the contents discharge, with alleviation of the symptoms, and so on until surgery gives permanent relief.

Cholecystectomy

Many of the foregoing arguments against the operation of cholecystostomy are the strong reasons for cholecystectomy, such as: (1) The elimination of the formation of sinuses resulting from an incomplete operation, i. e., leaving a stone. (2) The use of nonabsorbable suture material in implanting the drain, producing an operative sinus of commission instead of omission. (3) The leaving of an infected body, the gall bladder, producing or prolonging morbidity. (4) The leaving of a useless shell that is subject to further invasion or to a new infective process, or that may again produce stones. Any and all of these subject the patient not only to many disagreeable symptoms, but likely to the necessity for another operation which, owing to postoperative adhesions, etc., makes the second operation a greater hazard than a complete excision in the first place would have been.

In about three hundred operations in a short period of time which I reported a few years ago, the mortality of "ectomy" was almost half of one per cent less than that of "ostomy." Fearing that I had erred, but not finding it so in going over my figures, it was pleasing to note shortly after that a large western and midwestern clinic in its report gave about the same mortality results. This, very naturally, was quite an incentive to continue the "ectomies," irrespective of other stable and strong arguments.

The period of convalescence in cholecystectomy is far less than that in cholecystostomy. This is an added argument when operating on the business man or woman, or on the laborer.

Nevertheless, all having been said for or against these operations, it must be admitted that the occasional operator will or should have his best results, as to mortality, from cholecystostomy. Each operator should, therefore, in the interest of his patient, do that type of operation with which he is most conversant and the one which will bring relief with the least risk. Bear in mind that each cholecystectomy entails a potential risk of injury to the common or hepatic duct; that the hepatic artery, portal vein, and vena cava have been injured in this operation; and that the cystic artery has been injured or has slipped out of the forceps' grasp, producing a great deal of troublesome hemorrhage before it could be caught and the bleeding controlled.

Either of the two operations under discussion has been accompanied with injuries to the duodenum, stomach, and transverse colon. Fortunately, if recognized, these injuries are far easier to control than damage to the ducts or blood vessels. Recognized injury to the common duct should be repaired immediately by one of the many efficient methods. It is the late effects of injury to the ducts, or secondary contraction, that are difficult to repair and give a high mortality.

Spillage of bile into the operating field is not serious, nor is the spillage of pus or infected gall-bladder contents. It is conceded, of course, that the field of operation has been well protected by gauze sponges, and carefully wiped or sponged before the final closure. Massive spillage of bile into the peritoneal cavity during the first few postoperative days has occurred four times in my personal experience. Three of these patients recovered following introduction of a proper drain. The fourth died from a postoperative pneumonia, complicating the condition of a third-day discovery of intraperitoneal bile.

A remarkable case of massive spillage of bile came under my observation on the fifteenth postoperative day in the wife of a physician. She was one of three patients on whom cholecystectomy was done in one afternoon by a surgeon from a neighboring town. The others made a proper recovery. This patient began her second day with some abdominal distress, normal temperature, and slight acceleration of pulse. She had finished her fifteenth postoperative day, and had been home twenty-four hours when I first saw her. She gave a history of treatment for tympanites for the past ten days. Her abdomen was so distended that she presented the picture of full-time pregnancy. She had formerly had a low median-line incision that was made to reach some tubo-ovarian condition. The morning of the day I saw her, the operating surgeon had opened the lower incision to what he took to be omentum, and, finding some bile-stained fluid, had inserted a catheter drainage tube, but not into the peritoneal cavity. Her pulse was 110, respirations 30. She was fairly cheerful but complained of difficulty in breathing and of "gas" in the abdomen. Percussion revealed a dullness like that of ascites. A diagnosis was made of intraperitoneal bile caused by slipping of the cystic-duct ligature or by an unrecognized injury to the common duct. Over ten pints of clear bile were removed by introducing the tube into the peritoneal cavity. In two days the patient was admitted to the Postgraduate Hospital, where she was observed for five or six days. After discharging a fair amount of bile for three days, the abdomen then began to distend in the

upper portion. Operation through the original gall-bladder incision evacuated eighty ounces (five pints) of bile that were measured, besides the spill of over eight to ten ounces on the side. The subsequent convalescence was rapid, bile ceased to flow in a couple of weeks, and the patient gained in weight. Then she began to jaundice. Injury to the common duct was diagnosed, and was repaired in six to eight weeks, after which the patient recovered and made quite a gain in weight.

The details of this patient's experience have been presented to show the innocuousness of bile in the peritoneal cavity. I also refer you to an early contribution of mine, some twenty to twenty-five years ago, on typhoid rupture of the gall bladder with a large amount of bile in the peritoneal cavity, followed by recovery.

These remarks about intraperitoneal bile call for discussion of the question of drainage. For many years, long before Richter's article on nondrainage, I was accustomed to sew up tight patients who showed no marked evidence of infection. It was in these patients that the four leakage cases occurred. Each time I had a leak I resorted to drainage until my nondrainage courage returned. I have now for some years been closing all cases even of mild infections, and draining only those with a marked amount of edematous tissue in the gall-bladder sulcus or a profound amount of pus in the field of operation, with or without gangrene.

The nondrainage argument does not apply to invasions of the common duct, nor to patients with pancreatitis. I am not inclined to the radical procedure or advice of Eisendrath, of Chicago, to open the common duct in all gall-bladder patients, but am rather guided by the condition of the common duct at the time of operation and the history preceding the operation. If there has been a positive jaundice history, if the common duct is distended, of course if stone or stones are palpable, then I add a choledochostomy to the cholecystectomy.

Before operating on a patient with jaundice of over three to four days' duration I invariably demand a complete blood-picture and a test of the coagulation time by the capillary method. Should the coagulation time be over seven minutes, I do not expose the patient to a slow, oozing death, but use all known methods for reducing the coagulation time, the simplest being Walters's administration of chlorid of lime. If this does not reduce the coagulation time after the third dose, blood is transfused to the full limit, and the operation is performed.

I am accustomed to make an ample perpendicular incision through the inner and middle third of the rectus muscle, with the Bevan extension when necessary. The liver is rotated when possible. The Balfour modification of the Garland retractor is a helpful accessory, and in fat people the third blade is of the Horgan type. This retractor will eliminate the hands of two assistants and useless side instruments. I have not used sand bags nor elevation for many years. Not experiencing any difficulty in exposure without them, and not benefiting any by them, these so-called aids were dropped. Neither have I found it necessary to pack the space above the liver in doing even the most difficult cholecystectomies.

There are no hard and fast rules as to the method of removing the gall bladder from above downwards, below upwards, or a combination of approaches, but I am accustomed to approach the gall bladder from the side, first with knife or scissors incising the peritoneum about one half to three quarters of an inch from the liver as far up as the fundus and down to the cystic duct. The gall bladder is rotated on its long axis as the cellular tissue, vessels, etc., are incised. This allows free vision of the cystic and common ducts. The cystic duct is clamped fairly close to the gall bladder, and may or may not include the vessels. Another clamp is placed on the cystic duct, etc., and the duct is then cut between. The proximal clamp is allowed to drop into the abdominal cavity. The distal clamp is used as a retractor while the gall bladder is dissected free from its bed. Suturing the cystic fissures is done only to prevent oozing. I have not found it necessary to carbolize or cauterize or suture-bury the stump of the cystic duct.

There are times when a preliminary emptying of the gall bladder will facilitate its removal. One of the best aids in addition to the retractor is the use of a sucker with the ordinary tonsil sucker attachment. By using this aid, one keeps the field clear of bile, pus, and blood, being able thereby to see the anatomy perfectly and detect bleeding points.

There are times, especially in the acute and edematous cases, when one cannot definitely outline the cystic duct. In this type it is advisable to split the gall bladder sufficiently to introduce the index finger into the ampulla, thereby outlining the beginning of the cystic duct.

I cannot close without calling attention to the anomalous vascular and duct possibilities. The vascular anomalies are easily treated, while the duct anomalies require very careful consideration. The gravity of cholecystectomy and ligation of an anomalous cystic duct is apparent in such cases as the following in which operation was done at my clinic a few years ago: The bile flowed from the intrahepatic ducts through an anomalous duct to the gall bladder, the extra-

hepatic ducts being contracted or cicatricial. From the gall bladder it reached the common duct by what appeared to be a normal cystic duct. Repair attempts were fatal because of further anomalies in the hepatic system. A second case of multiple or anomalous ducts occurred in my service last year. Fortunately these two ducts were small and led into a normal hepatic duct.

As to the mortality, I can safely say that our deaths are not due to peritonitis, but to pneumonia, renal, or cardiac complications, in the order given. The mortality is greater in the male than in the female.

Summary

I advise cholecystostomy when it is necessary to conserve the gall bladder for a byway in case of distal duct obstruction of neoplastic origin, and occasionally when the disease is due to inflammation.

I prefer cholecystectomy in one stage because of the rapid convalescence; because of its lesser or equal mortality; because of its lesser morbidity; and because it obviates a secondary operation for a sinus, retained stone, or recurring cholecystitis.

I advise that the occasional operator should do the operation with which he is most familiar, and with which he can procure the lesser mortality.

In doing a cholecystectomy, great care must be taken to prevent injury to the ducts, the vessels, and the surrounding viscera.

60 West Fifty-second street.

THE ETIOLOGY OF GALL-BLADDER DISEASE*

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Gall-stone disease includes not only disease of the gall bladder but also of the common and hepatic ducts, the intrahepatic ducts, the liver, and the pancreas. It must be admitted that the cause of gall-stone disease is infection. The nature of the infection depends upon the particular organisms causing it, the more common ones, in their order of frequency, being the streptococcus, bacillus coli, staphylococcus, typhoid bacillus, etc. Before the introduction of bacteriology into the realm of surgery, gall-bladder disease was thought to be practically always the result of typhoid fever, occurring either as a complication or as a sequel. The typhoid bacillus is seldom found now, probably because of the limited incidence of typhoid fever compared with its former distribution. Today the organisms most frequently responsible are streptococci and colon bacilli. They are not found as often in the bile of the gall bladder as in its walls, and also in the cystic lymph node located at the junction of the pelvis of the organ and the cystic duct and in the lymph nodes along the common duct, especially the node in relation with the terminal portion of the first or supraduodenal portion of the duct. This node is often seen to be as large as the terminal phalanx of the thumb. Bacteriologic examination of this node shows the same bacteria as are found in the cystic node. Fortunately, these organisms and their toxins are often destroyed in the node itself, so that they do not always pass into its efferent lymph vessels. Otherwise the pathologic possibilities of cholecystitis would be much greater than they already are. But too long-continued abuse, in the form of oncoming bacteria and toxins, leads to destruction and loss of filtering power; and they then pass on. This is one of the chief reasons why the surgeon urges early ablation of the infected gall bladder.

In a recent study of 57 gall bladders removed at operation in the Lankenau Clinic, it was found that 24 of them, together with the cystic node, gave positive cultures; while 6 were positive but the cystic node was negative. The bile in the 57 instances was negative in 50 and positive in 7.

Microörganisms, to be deleterious, must have a soil favorable for their growth and invasion. This, in the case of the gall bladder, is offered by stagnation of bile, the main predisposing cause of infection. The gall bladder filled with stagnant material or the occluded hepatic or common duct may of themselves assume the importance of a clinical entity. Obstruction to the discharge of bile, whether from the hepatic, the common, or the cystic duct, or from the gall bladder, especially the latter, is supposed to cause hypertrophy of the muscular tissue. This is somewhat doubtful. It has never been definitely observed, and if it occurs it does so very early and is soon followed by destruction, as in all hypertrophied muscle. But there is thickening of the mucosa and moderate leukocytic infiltration of the submucous, muscular, and subserous coats. This infiltration, according to Aschoff and Bacmeister, is not an evidence of infection, but is due to increased absorption in an attempt to compensate for stasis; in other words, it is evidence of diverted function of the gall bladder.

What are the functions of the gall bladder? The chief one is absorption and the next is excretion of mucus. Absorption is evidenced not only by the absorption of fluid but also of par-

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ticular substances from the bile by the mucous membrane, which reduces the bile one sixth to one tenth of its bulk (Rous and McMaster), thus concentrating the bile. The fluids and solids absorbed are carried away, probably by both the lymphatic and the blood circulations. This explains how infection is conveyed in many directions, especially to the head of the pancreas.

The mechanism by which the gall bladder empties itself is complex: Muscular contraction, variations in abdominal pressure, milking of the common duct by duodenal peristalsis, the "Springer air-pump" action of the bile as it descends from the liver flowing past the opening of the cystic duct. Elastic recoil may also play a part in this act (Moynihan). Still the removal of the gall bladder does not cause any perceptible changes in the general physiology of the individual. The only perceptible anatomic change is some enlargement of the extrahepatic ducts and of the opening of the papilla. This effect is seen at operation on a diseased gall bladder, particularly in long-standing cases of calculous obstruction of the common duct, after many attacks of inflammation of its walls, with consequent contraction and reduction in size. The gall bladder, small, shrunken, and effete, has practically lost its function and nature has performed a cholecystectomy. In these circumstances the sphincter of Oddi is believed to be permanently open. But I have not always found this to be so, as in some cases there is much difficulty in carrying a small probe through the papilla of Vater into the duodenum. This, however, does not prove that the muscle of Oddi is not functionless, but rather that the obstruction is due to stricture, the result of exudative infiltration of the submucosa surrounding the papilla, or of a pancreatitis. When I meet with this condition, I gradually dilate the opening of Vater by passing a series of graduated probes.

We are all familiar with Meltzer's so-called law of contrary innervation, which in the case of the parts under discussion assumes that a relaxation of the sphincter of Oddi is accompanied by contraction of the gall bladder. From this postulate has developed the Lyon treatment of medical drainage of the gall bladder, the common, and the hepatic ducts. I shall not discuss this method except to say that I have never seen a permanent cure where this treatment has been persistently carried out. I am reasonably sure it has pathologic possibilities. It may have a place, but only a very small one, among the diagnostic methods for gall-stone disease. With Erdman and other surgeons of large experience, I still believe that in cases not otherwise reasonably clear, incision, inspection, and palpation is the only way of making sure.

Is infection of the gall bladder primary or secondary? Primary infection may occur, but it is so rare that one may say that secondary infection is the prevalent condition. This, then, raises the question as to what are the sources of the secondary infection, and how is it carried to the gall bladder and the biliary passages, so as to cause the pathologic condition? The sources of infection are the mouth, the teeth, the tonsils, the sinuses, etc. The most common source is the appendix, making it the arch enemy. I have spoken of how infection is carried away from the gall bladder. Let us now consider the avenues by which infection is carried to the gall bladder and the biliary apparatus. These paths are the blood stream, the lymph stream, the bile stream, and through the walls of the gall bladder by direct extension from its neighboring organs, the stomach, duodenum, liver, colon, etc.

The blood stream includes the arterial, the capillary, and the venous systems, of which the portal is the most important, because it drains the walls of the alimentary canal, from the lumen of which bacteria may pass into the venous circulation. Fortunately, the organisms may be imprisoned in the lymph nodes and the endothelium of the veins of the liver. Such retention and subsequent destruction are among the many protective provisions of nature. The bactericidal power of the liver is a most important factor in the destruction of bacteria. Those that are not destroyed in the liver may be excreted into the bile, enter the gall bladder, and infect it in this way. That the appendix plays the important rôle it does in the spread of infection is due to the fact that its veins are tributaries of the portal system and its lymphatics communicate with the lymphatics of the liver and the gall bladder. When we realize that the appendix is the most common site of intra-abdominal infection, we appreciate how important a factor it is in upper-abdominal disease.

In passing, permit me to mention the monumental work of Rosenow on hematogenous infection and elective affinity of organisms, which has been of such value to the surgeon as well as to the internist and has been productive of so much good to suffering humanity.

The lymph stream is second in importance to the blood stream in carrying infection. It is interesting to note the communication of the lymphatics of the liver with those of the gall bladder through which the former infects the latter, and vice versa. The present-day belief is that cholecystitis is secondary to infection of the liver. The free communication of the lymphatics of the gall bladder and the bile ducts with those of the pancreas argues strongly in favor of early as against late surgical interference. This leads me

to say that recurrent symptons after operation upon the gall bladder and bile ducts is not due to faulty surgery, but to the advanced pathology which has crippled the organs in communication with the gall bladder through the lymphatics. Surgery, therefore, should not be blamed.

Infection may also ascend from the duodenum, although downward infection is the more likely because of the direction of the bile current. However, the retrograde submucous currents (Bond) may be a factor in carrying infection upward.

Direct extension occurs through an adherent infected viscus, for example, where an acute appendicitis is in contact with the gall bladder or with the duodenum the site of a perforated ulcer. I have met with this condition upon a number of occasions, and have removed the gall bladder and the appendix, and repaired the perforated ulcer. I frequently find the gall bladder diseased and adherent to the duodenum at the site of a non-perforated ulcer. In such instances I always remove the gall bladder in addition to repairing the duodenum.

Stop, look, and listen before advising your patients with gall-stone disease against surgery. Outside of the diseased appendix, I know of no class of cases that, generally speaking, is more truly surgical.

1830 Delancey Place.

THE PROPER RELATION OF THE PRACTICING PHYSICIAN AND HIS COUNTY MEDICAL SOCIETY TO THE PUBLIC*

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I have a very high regard for the advantages to be gained from organized effort; advantages to the profession as a whole, personal advantages to the individual physician, and even greater advantages to be conferred upon the human race. There can be no question that the unified effort of people working toward a given end will accomplish better results than can possibly be attained by the same number of persons working without any attempt at concerted action. Unfortunately, organization is not always followed by unified effort, which is one of the questions discussed below.

There have been many striking changes in the practice of medicine during the past twoscore years, and not a few of these bear upon the relationship of the physician to the public. That intimate personal relation once existing, which was recognized under the general title of "family physician," has almost entirely disappeared; not entirely, we are pleased to say, for the wiser physicians still manage to keep the same close contact with their patients. In place of that close association of individuals we have come to look upon the patient in an impersonal way, as a member of the community rather than as a separate unit. We have recognized the fact that a sick person, no matter what the nature of his illness, is not an isolated specimen to be treated without regard to others, but that he is a menace to the community of which he is a part, and in dealing with him and his illness we must have due consideration for the welfare of his neighbors. At the same time, advances in scientific medicine have enabled us to practice the art of medicine on what might be called a wholesale basis in contrast to the old retail plan. This is not only an age of mass production but an age of dealing with problems in their entirety and with due thought of the relative value of all the factors involved.

It is evident then, first, that the practicing physician of today has a markedly different relationship to the public from that held by his predecessors. This was well expressed by the president of the Wisconsin Medical Society last year when he said: "The practice of medicine of the past was more an individualistic affair, while today the physician has not only his patients to serve, he must consider the welfare of the public. He is a public servant, and he must become more so with the passing years. But, better so than have the state supersede him." In somewhat the same vein, the president of the New York State Medical Society, at the last annual meeting, said: "Developments in the special field of public health and preventive medicine in this State demonstrate, in no uncertain manner, the fact that physicians individually and collectively must assume their responsibilities in all the activities that have to do with preventive and curative medicine. The work of disease prevention and disease treatment has become so closely related that it is impossible to separate the two."

I might continue to quote from eminent members of the profession and from a number of the most intelligent leaders in the general educational field—men like George E. Vincent and Glenn Frank—who have spoken of the changing conditions and the necessity for change of attitude and of methods on the part of practicing physicians. But most of you are doubtless familiar with their published remarks. I recom-

* Read before the Conference of Secretaries of Component County Medical Societies of the Medical Society of the State of Pennsylvania, Harrisburg, December 4, 1928.

† Editor of the *Journal of the Medical Society of New Jersey.*

mend that those of you who did not have the privilege of hearing the presidential address of Dr. Thayer at the 1928 session of the American Medical Association read his remarks as they appeared in the *Journal* of June 16, 1928. May I specifically direct your attention to portions of that address, combining abstracted sections as follows:

"We as physicians" (he had been comparing the life and work of the physician with that of other professional and business men) "need not complain that the results of such a life, when they are what they should be, are misapprehended or unappreciated by the public even though they be not the subject of daily comment on the front page of the newspaper. It behooves us rather to look to it that we deserve and preserve the enviable reputation that is ours. There can, it seems to me, be no doubt that the close personal association between physician and patient, the human influence, is in many ways the most vital and important element in the practice of medicine. Every serious physician recognizes this. Every serious physician realizes that, excepting in the rarer emergencies, his greater work lies in the exercise of this human influence—in his ability to lift, to encourage, and to put sound ideas into the mind of his doubting and fearing patient; to teach him how to live, to discover and to teach him how to avoid those daily influences that are breaking him down. Our main functions as physicians are to care individually for our patients, to treat them when ill and to give them such advice that they may preserve their good health. These are our first and most obvious duties. But equally important is our duty to prevent the spread of disease from our patients to others within the household or outside; to coöperate in every respect with local boards of health in the early reporting of registrable disease and through thorough and scrupulous attention to all prophylactic measures; to use every means in our power to maintain the character of our public-health officials—using our influence in every way to bring it about that only trained and experienced sanitarians are placed at the head of municipal, county, or state departments of health. Just as in matters of legislation it is the lawyer who is the specially qualified adviser, on whom special responsibilities in connection with the framing of laws should fall, so in matters of public health it is the physician on whom the burden of special competence, and therefore special responsibility, rests."

So much for the direct relationship of the individual physician to the public. Now let us consider his part in the county society and the relationship of that body to the public. All of us here present recognize the fact that the county medical society is the basic stone in the structure known as the organized medical profession. No matter from what angle we view the question, we arrive at the conclusion that it is a duty as well as a privilege for the individual physician to join his local county medical society. It may seem a waste of time to discuss so simple a proposition as that expressed in the axiom "In union there is strength," and yet it is evident that many members of county societies do not appreciate the import of that fact. The individualistic stand of physicians must be abandoned if we would accomplish the best results for the public welfare or even for the professional welfare. Dr. Vincent, speaking recently of the general practitioner, said: "He will have to meet the new conditions. He will have to submit to a measure of teamwork in the use of laboratories and other resources; and most important of all, he must become a practitioner of preventive medicine, a counselor on health."

How are we going to effect this desired action? It can be done only through coöperation with our confrères, and such coöperation can best be provided and directed for the good of all through the contacts and conferences made possible by local organizations. But it is not enough that we have organized medical societies; the best piece of machinery has little value except as it can be made to work. How can we use the county society to the best advantage and for the greatest benefit to all concerned?

For several years past there has been a growing recognition of the fact that medical societies must establish and maintain close relations with the public, especially with those "lay" groups, leagues, clinics, foundations, and welfare associations, that in one way or another concern themselves with public health. We have evidenced our interest in the public health by educational campaigns to instruct the laity with reference to disease prevention. We must do still more; we must concern ourselves more deeply in the state, and in every county in the state, with the guidance and direction of forces that we have ourselves let loose in the community.

Do not overlook the fact that for some years we have been preaching that smallpox can be prevented, that typhoid fever and malaria constitute a disgrace upon any town, that tuberculosis is a preventable disease, that diphtheria can be wiped out by immunization, that cancer is curable if diagnosed while in the incipient stage. What is the public response to all this? It is not unnatural for the intelligent citizen to say: "You possess the knowledge whereby all

this may today be accomplished; you have known how to do some of these things for years, some of them for many years. Why, then, do these diseases continue to scourge our state?" It will not suffice to answer that we are ready to eradicate some or all of these diseases when they want us to. They do want us to do so; they are showing that in many ways. They form these leagues to help us in dissemination of life-saving knowledge; they start new clinics for the practical application of what we have taught them theoretically; they offer money to meet the cost of caring for the "submerged half." Sometimes these lay organizations make mistakes—mistakes which, generally speaking, grow out of overenthusiasm or too great haste to reach the goal; but do not we also make mistakes occasionally? The important thing for us to consider is that we must be more (not less) closely associated with these welfare movements; that we must as individual physicians accept membership in such organizations; that we must help them to direct their energies along the right channels. That, after all, will be but another expression of the ideals of our profession.

In the *Journal of the Kansas State Medical Society* for August, 1928, Dr. Lerrigo makes this pertinent remark: "It doesn't make a continental bit of difference whether we, as doctors, like the health movement or not. It is here, and it will stay, and it will grow regardless of any attitude we may take. Tell a mother that twice as many children are dying as should die during the first year of life, and you arouse her interest. When people realize that diphtheria, scarlet fever, typhoid, and smallpox are preventable, and that they are not being prevented, they will ask somebody 'How come?'—and that 'somebody' will be you doctors."

It is our bounden duty not to obstruct any movement, no matter from what source it emanates, which promises to aid in the abolition of disease and the alleviation of human suffering. It is the duty of the individual physician, and of the groups of physicians combined into county and state societies, to assist in promoting measures designed to establish healthful living conditions and to prolong life. Naturally, not every movement intended to prevent diseases or to correct existing evils will be conceived in wisdom or conducted with good judgment. Even a good idea may be misapplied; an excellent plan may be mismanaged. An enthusiastic fool may rush in where an angel would fear to tread, or an unintelligent worker supplied with fine equipment and perfect working plans may, in the superabundance of his ignorance, waste money and energy, or even wreck his machinery, without accomplishing anything toward attainment of his objective.

It is at this point that the relationship between the county society and the public becomes a matter of prime importance. Let the representatives of the medical profession enter into communion with these other agencies and use their special knowledge for the proper development and guidance of all efforts to rid the world of its problems attending and growing out of sickness. The medical profession needs the aid of every citizen in its fight against disease; needs not only financial support, but the active personal labor of every citizen to make such a campaign effective. On the other hand, I have heard the statement more than once that no health movement can hope to succeed without the active support of the medical profession—particularly of that portion of the profession that embraces the general practitioner. Perhaps that is true, but the fact itself and alone does not constitute a good and sufficient reason for members of the profession withholding their support from worthy movements. Let us recognize the fact that in this tremendous task the physician and the lay worker in the public-health field need each other, and then let us not wait to be invited, or compelled, to coöperate in this work, but let us rather offer our assistance and endeavor to establish an effective coördination of all interested elements.

If I may, out of my experience and observation, offer any piece of advice, it is that organized medicine should assume leadership in all activities bearing upon the problem of health and disease, and that it can best do this by coöperating with other agencies and organizations. It might be well, as is being tried in some states, to establish for each state and for each county society a special committee on public relations, whose duty it would be to harmonize and make effective use of all agencies that may be helpful in promoting public welfare; perhaps you have some such organization at the present time.

Next, I would urge you to teach the members of your county societies to support whatever action the organization may have decided upon after proper deliberation. Nothing can be more harmful to organization work than the insidious opposition of recalcitrant members who permit the organization to go on record and then, as individuals, go out and throw monkey wrenches in the machinery.

Finally, I would warn you to accept this leadership in public-health work and to make good use of it if you would avoid a state of affairs that may be much worse. One of the things experience has taught me, after a few minor

accidents, is to avoid being run down and crushed by any approaching irresistible force. There is much talk today about the coming of "state medicine." The term "state medicine" does not of itself scare me. What I am afraid of is that we may by our own actions invite the establishment of a bad form of state medicine. It is within our power to obviate the evils of state medicine by voluntarily giving the public all the benefits that are claimed theoretically for state medicine; and this we can do without in any manner injuring the medical profession; and this I believe to be our duty.

As I conceive it, then, the proper relation of the practicing physician and his county medical society to the public is that of close and intimate counselor in all matters pertaining to health, voluntary guidance in all public-health movements, and active participation in all efforts to eradicate disease.

5 I, Vermont Apartments.

EUGENIC STERILIZATION*

Report of Thirty-one Cases and a Discussion of the Subject

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One of the outstanding challenges to modern medicine and modern civilization is what to do about the increasing number of feeble-minded individuals.

According to the 1920 census, there were estimated to be 656,000 mental defectives in this country, only 75,000 of whom were receiving supervised care. This means that there are considerably over a half million at large, each one of whom is and should be considered a social menace.

In 171 of our cities, there are 34,000 backward children receiving training in so-called "special classes." These classes merely endeavor to grind into these children their three R's. Most of these need institutional supervision, and all of them should be prevented from reproducing their kind.

These facts make it obvious that segregation such as has been practiced in this country since 1844 is unable to cope with the situation. Appeals are being made for more and larger institutions.

Parole is being advocated and practiced in many institutions with varying degrees of success, but on the whole this system is woefully inadequate to the situation. It does not prevent the feeble-minded individual from reproducing his kind. It does give the child more freedom, but he is hopelessly handicapped and is altogether unable to compete with the normal individual. As a rule, he is easily led and unfortunately more often in the wrong direction; hence, we find that a large number of the criminals are feeble-minded, they having been the tools of a "master mind."

Since 1905, eugenic sterilization has been advocated in this country. By sterilization we actually get to the root of the trouble and prevent the feeble-minded from reproducing their kind. We need to educate public opinion along this line. When we consider that from 60 to 70 per cent of feeble-mindedness is directly traceable to heredity (M. W. Barr: *Study of Etiology in 5,000 Cases of Mental Defect*), we can realize what an economic saving would be possible in our land if all the known feeble-minded could be prevented from carrying on their lines.

In 1892, two boys of the Elwyn Training School were sterilized. The benefits of the procedure were reported at that time. Since then, 133 boys have been asexualized, the last 20 of whom are now being reported; and 129 women have been sterilized and we are reporting the last 11 of these.

We have no law in Pennsylvania which will permit sterilization. The cases I now report are those done at the request of parents or guardians. They are listed under three types of operative procedures; namely, vasectomy, castration, and salpingo-oöphorectomy. The chief reasons for operating were: sexual perversion, obscene habits, excessive nervousness, and mental retrogression.

Puberty, or shortly thereafter, is the best age at which to perform sterilization. Pre-adolescent operations are, as a rule, more difficult because of lack of development of the sex organs. In this series, the youngest male operated upon was 12, the oldest 31, and the average age was 18. Of the females, the youngest was 13, the oldest 39, and the average 23.

It is difficult to estimate results in the comparatively short period of time since these operations were performed. However, I shall endeavor to give some idea as to what has been accomplished.

Vasectomized boys may and do masturbate, but we find that the desire grows less as time goes on, until in most cases it entirely ceases. The time required for the cessation varies from six months to three or more years. With the cessation of evil habits, there is often a quickening of the mental faculties with changes in dis-

* Read before a meeting of the Delaware County Medical Society, held at Elwyn, Pa.

Cases Sterilized by Vasectomy

Case No.	Mental Grade*	Date of Operation	Previous Behavior	Postoperative Changes		
				Habits	Nervous System	Mentality
1	Middle	1/31/25	Chronic masturbator, sexually exaggerated, extremely nervous.	No change.	No change.	No change.
2	Low	9/3/27	Obscene habits, sexual pervert, retrograding mentally, very excitable.	Marked improvement.	Much less excitable.	No change.
3	High	9/24/27	Very bad habits, retrograding.	Improved.	No change.	Improved, as retrograding process has ceased.
4	Middle	1/19/28	Very bad habits, sly, insolent, depressed.	Marked improvement.	Improved.	Depression gone. Industrious, eager to please.
5	Low	2/28/28	Bad habits, uncleanly, indolent.	Marked improvement.	Improved.	No change.
6	Middle	3/27/28	Obscene habits, sullen, insolent, indolent, very nervous, epilepsy.	Slight improvement.	Less nervous; epilepsy growing worse.	Less sullen, more industrious.
7	Low	5/7/28	Very bad habits, extremely nervous.	Slight improvement.	No change.	No change.
8	Low	6/6/28	Very bad habits, indolent, nervous.	Improved.	Less nervous.	Industrious.
9	High	4/14/25	Bad habits, very nervous, indolent.	Marked improvement.	Marked improvement.	Became industrious.
10	Middle	6/6/28	Sexual pervert.	No improvement.	.....	.....
11	High	4/4/28	Very bad habits, very excitable.	Slight improvement.	Less excitable.	No change.

*Classification of M. W. Barr.

position and behavior for the better. In the castrated cases, the changes are usually more rapid. If there is any serious effect on the health from the sudden removal of the internal secretion of the testicle, it has escaped our notice. I do not believe it is in any way harmful. Also, we had little or no trouble with our female patients after having established an artificial menopause.

The habits of 9 of the 11 vasetomized boys have improved (81 per cent). The habits of 8 of the 9 castrated, or 80 per cent, show improvement. The habits of 6, or 54.5 per cent of the girls show improvement. It would seem from this that it takes a longer period for improvement to manifest itself in girls. Considering the group of 31 as a whole, 70.8 per cent showed improvement.

From the standpoint of the effect of sterilization on the nervous system, in this series of cases we find improvement in 7 of the 11 vasectomized boys, or 63.6 per cent improved. Five of the 9 castrated, or 55.5 per cent, showed improvement. In the girls, only 3 of the 11 cases, or 27.2 per cent, showed improvement. Considering the group as a whole, there was improvement in 48.7 per cent.

In a school of this nature, we are greatly interested in the effect of sterilization on the mentality of the patients. In general, we find they are much more tractable, more gentle, more docile, with fewer outbursts of temper, and on the whole much happier of disposition. In the comparatively short period of time since the operations, 12 of the 31, or 38.7 per cent, show improvement mentally.

I shall say very little as to types of operations for sterilization. Many have been devised, and in the male the following may be done: phallo-orchidectomy, phallectomy, spermectomy, ligation of vas, x-ray treatment, vasectomy, castration.

In general, it may be said that only the last two are performed. The operation of vasectomy is so simple that it could be carried out as an office procedure in any surgeon's office. Cas-

Cases Sterilized by Salpingo-oöphorectomy

Case No.	Mental Grade*	Date of Operation	Previous Behavior	Postoperative Changes		
				Habits	Nervous System	Mentality
1	High	10/1/27	Sexually exaggerated, indolent, insolent.	Slight improvement.	No change.	No change.
2	Middle	4/20/25	Bad habits, excitable, melancholic at times.	Marked improvement.	Less excitable.	No melancholia.
3	High	4/13/27	Sexually exaggerated (boy-crazy), indolent, insolent.	Slight improvement.	No change.	Industrious.
4	Middle	5/2/25	Sexually exaggerated, indolent, untidy.	No change.	No change.	No change.
5	Middle	6/9/28	Bad habits, excitable.	No change.	No change.	No change.
6	Low	6/9/28	Bad habits, excitable.	No change.	No change.	No change.
7	Low	5/16/28	Obscene habits, soils and wets, indolent.	Slight improvement.	No change.	No change.
8	Middle	5/16/28	Bad habits, very nervous, indolent.	Marked improvement.	Less nervous.	Industrious.
9	Low	12/3/27	Bad habits, very nervous, indolent.	Slight improvement.	Improvement.	Industrious.
10	High	3/27/28	Sexually exaggerated (boy-crazy), indolent.	No change.	No change.	No change.
11	Middle	3/27/28	Bad habits, indolent, obstinate.	No change.	No change.	No change.

*Classification of M. W. Barr.

tration is more difficult, and incapacitates the patient for a few days. It is an ancient operation; the early Egyptians, Persians, Chinese, Indians, and Romans performed it, and eunuchs have played important rôles in the civilization of each of these nations.

In the female, the following methods may be employed: x-ray, intra-uterine cauterization of tubal opening, fastening tubal ampulla into vagina, ligation of tubes, hysterectomy, double salpingo-oöphorectomy, double salpingectomy, double oöphorectomy. Here again, in general, either the oöphorectomy or the salpingectomy, or both, are best.

Eugenic sterilization of the unfit is not a new subject. However, it is now being widely discussed. Twenty-three states have passed legislation in its favor (H. M. Laughlin: *Eugenic Sterilization*, 1926, American Eugenics Society). As yet but about 7,000 operations have been performed in these states.

At the present time, the American Medical Association has not adopted any policy regarding this subject. In the report of the officers of the American Medical Association for 1928, under the "Bureau of Legal Medicine and Legislation," the question of eugenic sterilization is discussed (*J. A. M. A.*, 90; 1462, May 5, 1928). That Bureau does not commit itself to any legislative program, but deems it wise to study the situation in order that the policy of the Association may be wisely determined.

Controversy on eugenic sterilization is world-wide at the present time. Belgium, England, Austria, Japan, and New Zealand are a few of the nations in which it is being advocated. Dr. A. E. Tredgold, a noted English authority on the feeble-minded, enumerates (*J. A. M. A.*, 87; 1404, Oct. 23, 1926) the benefits of sterilization as follows: (1) By preventing propagation, sterilization would produce a marked decrease in mental deficiency and mental diseases. (2) By allowing the discharge of many inmates from institutions, it would lessen the cost to the community. (3) This liberty would increase the happiness of the defective.

In our own country, California has most actively carried on the battle for eugenic sterilization of all the unfit. Of the 6,244 sterilizations performed in this country under existing laws up to July 1, 1925, 4,636 were done in California (Laughlin). It was Pennsylvania, however, that in 1905 made the first effort at legislation for sterilization but the bill was vetoed by the Governor.

Laughlin maintains that the state has two

duties to perform in relation to the feeble-minded: (1) It must care for those mental defectives who are unable to care for themselves adequately, and who consequently are a menace to the state. (2) It should seek, so far as possible, to reduce to a minimum the production of feeble-minded persons.

A word as to the present-day legal status of eugenic sterilization:

Twenty-three states have legislation in its favor. In three of those states now having statutes in its favor, earlier attempts at legalized eugenic sterilization had been vetoed. In twenty-three states the matter has not been brought before the legislature. In three states, one of which is Pennsylvania, the matter has been brought before the legislators and has never passed successfully, either through defeat in the legislative assembly or through veto.

The constitutionality of such laws has been widely discussed. Earlier opinions, such as those of the Federal District Court of Nevada in 1918, held the Nevada laws to be unconstitutional.

The State Supreme Court of Michigan held that its first statute of 1913 was unconstitutional. The second statute of 1923 was held to be constitutional, and under it sterilizations are being performed. The New Jersey statute of 1911 was held to be unconstitutional, and no operations were performed under it. The Supreme Court of Appeals of Virginia in 1925 upheld the constitutionality of legalized eugenic sterilization. The decision of that court has been widely read and generally approved.

The part that our Federal Government plays in laws concerning eugenic sterilization at the present time is only to hold that such laws are the function of the several states rather than of the Federal Government. However, if eugenic sterilization becomes a national policy by the states, the Federal Government will have to collaborate by providing for sterilization of (1) Those immigrants who may be personally eligible for admission but whose family stock standards are such that they would be considered potential parents of socially inadequate offspring. (2) All persons below the standard of parenthood as set forth in model state laws, who are beyond the jurisdiction of those state laws, such as the inhabitants of the District of

Cases Sterilized by Castration

Case No.	Mental Grade*	Date of Operation	Previous Behavior	Postoperative Changes		
				Habits	Nervous System	Mentality
1	Low	8/11/27	Obscene habits, excitable, epileptic, tendency towards insanity.	Marked improvement.	Epileptic spasms less frequent; less excitable.	No change.
2	Middle	9/10/27	Sexually exaggerated, very nervous, retrograding mentally.	Marked improvement.	Improved.	No change.
3	Low	11/7/27	Sexually exaggerated, nervous, retrograding mentally.	Slight improvement.	No change.	No change.
4	Middle	2/2/28	Obscene habits, very excitable, incorrigible, unable to advance in school.	Marked improvement.	Slight improvement.	Improving in school.
5	Low	2/28/28	Obscene habits.	Marked improvement.	No change.	No change.
6	Middle	5/7/27	Obscene habits, indolent.	Marked improvement.	No change.	Now industrious.
7	Low Mongolian	6/6/28	Obscene habits, excitable.	Slight improvement.	No change.	No change.
8	Middle	6/14/28	Bad habits, excitable, early dementia præcox.	No change.	Less excitable.	No change.
9	Middle	6/14/28	Bad habits, extremely nervous, doing poor school work, tendency to retrograde.	Improved.	Less excitable.	Doing well in school.

*Classification of M. W. Barr.

Columbia, our territories, inmates of federal institutions, soldiers, and sailors.

To my mind, the prevention of feeble-mindedness is just as much a part of preventive medicine as is the prevention of smallpox or diphtheria. Not only should we in each state seek to prevent the feeble-minded from reproducing their kind, but as a nation we should not admit the feeble-minded into our land. In this small group of 31 cases, one was foreign-born and 30 were native-born; yet the parents (one or both) in 15 cases, or 48 per cent, were foreign-born and should never have been admitted to our shores.

Considering this further, we find that 12.9 per cent of our total population are foreign-born, whereas, 15.5 per cent of the inmates of 684 state and federal institutions are foreign-born. We are in need of more rigid investigation as to the mentality of those who seek to come to our land.

In conclusion, I should like to emphasize: (1) That every feeble-minded individual is a social menace. (2) That segregation cannot cope with the number of avowed feeble-minded. (3) That the subject of eugenic sterilization is receiving world-wide attention. (4) That we need more rigid investigation of immigrants as to their mentality.

Eugenic sterilization of the feeble-minded is a comparatively simple procedure which offers a means of reducing the number of feeble-minded in future generations 60 to 70 per cent. Aside from preventing reproduction, which is the chief reason for advocating the procedure, we find that it has improved the habits in 70.8 per cent, the nervous system in 48.7 per cent, and the mentality in 38.7 per cent in the series of cases just reported.

Elwyn Training School.

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Case Reports

A CASE OF MALTA FEVER ORIGINATING IN PENNSYLVANIA*

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In September, 1928, Kern[1] reported the first two cases of infection with Brucella melitensis var. abortus in Pennsylvania. One of these patients evidently contracted the disease in Pennsylvania; the other contracted the disease by drinking raw milk from an infected herd in Virginia.

The symptoms of the disease are described in textbooks under the caption "Malta Fever." The causative organism, Micrococcus melitensis, was discovered and described by Bruce[2] in 1887. Bang in 1897 proved that contagious abortion in cattle was caused by the Bacillus abortus. Evans[3] in 1918 demonstrated the close relationship between the Micrococcus melitensis and the Bacillus abortus.

The first case of Malta fever originating in the United States was reported by Craig[4] in 1906. In that report he stated that he was convinced "that a careful study by use of the Widal test and the agglutination reaction with Micrococcus melitensis of many cases of obscure continued fevers which are prevalent in this country, will result in the demonstration that Malta fever is by no means a rare disease in the warmer portions of the United States, and that many of the so-called anomalous cases of typhoid fever are, in reality, instances of the infection with the organism of Malta fever." Gentry and Ferenbaugh[5] in 1911 reported a number of cases occurring along the Mexican border of the United States. The patients contracted the disease from goats. In 1924 Keefer[6] reported the first case of Malta fever definitely proven to be due to the abortus variety of the Brucella melitensis. In the same year cases were reported by Evans[7] and Duncan.[8] Since then cases have been reported in the United States by Gage and Gregory, Hull and Black, Evans, Watkins and Lake, Scott and Saphir, Kampmeier, Hardy, Awe and Palmer, Murdock and Hall, and Giordano and Ableson.[9-18]

There is no characteristic clinical picture of abortus infection in man. Clinically indistinguishable from its twin, Malta fever, it must, like that disease, be described as an infection with an irregular course and an indefinite duration. The incubation period is unknown. The onset is usually gradual. The only symptom common to all cases is fever with no characteristic curve. The pulse and respirations are usually increased

*This is the second case of malta fever reported as originating in Pennsylvania, the manuscript having been submitted for publication March 1, 1929.—EDITOR.

in proportion to the fever. Chilliness or chills, with profuse sweats having a rather unpleasant odor, are very common. Patients have also complained of headache, insomnia, irritability, restlessness, and dizziness. Delirium is apparently uncommon. Gastro-intestinal symptoms such as anorexia, constipation, or diarrhea may appear. Epistaxis has occurred. There may be pain in the region of the spleen, or in the chest. Very often, confusing the picture, various joints may become painful and swollen.

The physical examination is not noteworthy except that in some instances the spleen and liver have been enlarged. Adenopathy and a dicrotic pulse may be present. In a few cases skin rashes have occurred which have been variously described as crops of petechiæ, red edematous spots, reddish scaly spots, or lesions resembling rose spots.

The duration of the disease is reported as being from ten days to over ten months. The diagnosis is purely a laboratory one. The disease must be differentiated from typhoid fever, tuberculosis, subacute bacterial endocarditis, rheumatic fever, malaria, influenza, and tularemia.

The subject of this report is a white male, aged 25 years, occupied as a laborer in a slaughter house. Complaining of a cough, chills, sweats, and fever, he was admitted to the hospital on October 13, 1928, with the provisional diagnosis of typhoid fever. About September 22, 1928, he began to feel chilly, followed by a feeling of warmth, terminating in a sweat. The chills, fever, and sweats then began to occur twice daily, usually about 10 or 11 a. m. and about 11 p. m. He began to lose weight, and had frequent nosebleeds. About October 1st the patient stated that a rash was noticed. There was a slight cough with little sputum, and the fourth day after admission a small amount of blood was expectorated. For the first two weeks of illness the patient was ambulatory.

The physical examination revealed a dicrotic pulse, a palpable lymph node at the angle of the right jaw, and an erythema with minute papules in the right mammary, inframammary, and hypochondriac regions. The urine was normal. X-ray examination of the chest showed nothing of note. Examination of the blood revealed hemoglobin 63 per cent, erythrocytes 4,010,000, white corpuscles 4,150, polymorphonuclear cells 70 per cent, small lymphocytes 21 per cent, large lymphocytes 9 per cent. Malarial parasites were absent. A Wassermann test and Widal tests for typhoid and paratyphoid A and B were negative. Repeated examinations of the sputum for tubercle bacilli were negative. A phthalein renal-function test on November 6th showed 25 per cent the first hour and 20 per cent the second hour. The temperature was very irregular, the pulse rate 85 to 100, the respirations 18 to 20. After the 48th day in the hospital, and approximately the 71st day of the disease, the temperature remained normal.

On October 24th, 15 ml. of blood was distributed as follows: 5 ml. to each of two flasks containing 200 ml. of plain broth; 1.5 ml. to each of two tubes of glucose brain broth; 1 ml. to each of two agar plates. All these cultures remained sterile after incubation at 37.5° C. for ten days, and were so reported at that time. It happened that the contents of the flasks and tubes were not immediately thrown out, and on the thirteenth day a surface growth was noted on one of the brain-broth tubes. This proved to be a very short Gram-negative bacillus. On the fifteenth day a like growth was noted in one of the flasks, produced by an organism of the same morphologic and staining characteristics as that seen in the brain broth.

In the meantime an antigen of the abortus variety of Brucella melitensis had been prepared, which the serum of the patient agglutinated in a titer of 1:2560. A portion of the serum and a growth of the bacillus were sent to the Hygienic Laboratory in Washington. Dr. Dyer reported the serum negative for agglutination with Bacillus tularense and positive for both Brucella abortus and Brucella melitensis, agglutinating the former at 1:2560 and the latter at 1:1280. The culture was agglutinated by a known abortus serum to the full extent of its titer, 1:640. A blood culture on December 30th, one month after the patient left the hospital, remained sterile for twenty-one days. At this time the erythrocytes were 4,050,000, hemoglobin 65 per cent, leukocytes 6,500, polynuclear neutrophils 58 per cent, polynuclear eosinophils 2 per cent, small lymphocytes 35 per cent, and large lymphocytes 15 per cent.

The most significant feature of the laboratory work in the case reported seems to be the cultivation of the abortus variety of Brucella melitensis from the blood, using only routine technic. The lessons most carefully to be observed are the importance of leukopenia and the desirability of trying to agglutinate Brucella abortus antigen with serum from any person whose clinical features indicate agglutination tests with the colon typhoid group.

The treatment is purely symptomatic. In our case, in the hope of sterilizing the blood stream, mercurochrome was used with no effect. Later, injections of gentian violet were used. The patient eventually recovered, but his recovery cannot be attributed with certainty to the therapy employed.

Third and Cherokee Streets.
Saint Luke's Hospital.

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ACUTE LARYNGOTRACHEOBRONCHITIS*

FRANCIS S. MAINZER, M.D.

CLEARFIELD, PA.

This disease occurs almost exclusively in children, and develops in the course of an acute respiratory infection. Emergency treatment is usually necessary, as the respiratory obstruction causes near-asphyxiation since these cases are frequently seen late. Even when the obstruction is partially overcome, death may be brought about by the toxemia, though the labored breathing must be a factor in the myocardial fatigue. Infections of this type may easily be mistaken for laryngeal diphtheria, but in these latter cases the voice is usually lost.

S. D., a three-year-old boy, was admitted to the hospital with the history that five days previously he had developed a croupy cough with a slight sore throat. The following two days he had also complained of having "been hurt" in the chest. The next day the parent noticed that the child was worse, and called a physician, who advised hospitalization. This was refused, but when on the fifth day the patient became markedly worse, he was brought to the hospital.

Physical examination showed him to be comatose and practically moribund, restless, and struggling for breath. There was marked retraction of the sternum, suprasternal notch, and epigastrium. There was some harshness and moisture discernible over the left lower lung, but no definite evidence of pneumonia. The right lung appeared normal. Both heart sounds were present, but rapid and weak. The rectal temperature was 104.3 degrees Fahrenheit, pulse rate 160, and respirations 50.

Direct laryngoscopy was carried out immediately, and showed the posterior pharynx to be red and injected and the vessels very prominent. The epiglottis was flaccid and lying over the laryngeal opening. The mucous membrane over the anterior and lateral surface of the larynx and ventricular bands was swollen and pale in color. On the posterior surface of the larynx there was a pseudomembrane about the size of a quarter which was grayish in color and had a velvety appearance. The vocal cords and glottic chink were unaffected, and appeared to open about normally for a child of this age. On manipulation of the laryngoscope over the membranous area, slight bleeding occurred due to peeling off of the membrane. A definite area of obstruction could not be seen.

X-ray plates made on inspiration and expiration showed some blockage of the left main bronchus, but there was no evidence of any pneumonic areas.

On account of the pseudomembrane, it was decided to administer 20,000 units of diphtheria antitoxin. The respiratory obstruction was not relieved; hence tracheotomy under infiltration anesthesia was performed, with only slight relief. Bronchoscopic aspiration was not used, as the bronchoscope would have had to be passed every fifteen minutes, which without doubt would have done as much harm as good.

Following the tracheotomy, a catheter was passed through the cannula of the tracheotomy tube on the outer end of which was attached a Becton, Dickinson bulb syringe for aspiration. As the catheter was withdrawn, a thick plug of chocolate-colored secretion adhered to the end of the catheter, and immediately some relief of the obstruction was noted, though the respirations remained rapid. The same procedure was carried out about every fifteen or twenty minutes, and as a rule a small amount of thick secretion was present which could be removed only with some difficulty. After each aspiration a few drops of warm normal saline solution were instilled through the catheter and again aspirated.

Even though the obstruction was relieved and respiration was not so difficult and labored, the patient's condition kept getting worse. He died seven hours after the tracheotomy, his rectal temperature having risen to 106.3 degrees Fahrenheit. A smear and cultures showed a pure streptococcus infection.

A postmortem bronchoscopic examination showed the mucous membrane of the larynx to be grayish in color, with the appearance of velvet. It was swollen, and especially so over the anterior surface of the glottic chink. As the bronchoscope was passed into the trachea, it was noted that the entire mucous membrane of the trachea and bronchi had the same appearance, with a type of pseudomembrane over practically the entire area. A thick, sticky secretion was present, filling the entire left bronchus. A portion of this thick secretion was mopped from the small bronchi with considerable difficulty, and when the bronchoscope was removed and exposed to the air, the secretion on it was gluclike in character. The left main bronchus was practically occluded by a very thick, tenacious mucopus, smears from which yielded a pure strain of streptococci.

At necropsy, the trachea, lungs, and heart were removed in one block, the tracheotomy wound being extended down over the chest and the organs removed without difficulty. When the trachea was opened, both it and the larynx were found to be very much inflamed, and they contained a large amount of grayish pus. The bronchi were easily followed into the lungs, and both main bronchi contained large amounts of the thick exudate, though there was more in the left bronchus. The lower portion of the lungs was airless and limp, but the remainder of it was normal. In fact, before the chest plate was removed, it was noticed that the right lobe was not visible until the heart was retracted. No shifting of the mediastinum could be discerned.

A diagnosis was made of acute purulent laryngotracheobronchitis of streptococcic origin.

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Editorials

THE PHYSICIAN AND THE RED CROSS

Announcement has just been made of the forthcoming annual roll call of the American Red Cross for membership during the coming year, which will take place from Armistice Day to Thanksgiving Day, November 11 to 28. The response to this roll call directly reflects the degree of knowledge of what the Red Cross does each year in each community. Out of each dollar membership, fifty cents is retained in the community in which enrollment is made; out of a $5 membership, $4.50 is retained in the community. The fifty cents from membership enrollment which goes to National Headquarters is spent in national and international work. Each year thousands of dollars are expended for relief in disasters for which no general appeal for funds is made to the public. In many instances, annually, National Headquarters advances funds to local chapters for emergency relief in their communities following disaster, in order that this work will not be delayed while a public subscription of relief funds is under way. Such help is possible only because of the support of a large membership. The increasing demands on the organization's personnel and funds in this field alone stresses the importance of a representative enrollment for the coming year.

It seems timely, therefore, to call attention to some of the points where emergency disaster service touches the field of the local physicians and health authorities. Recognition of the fact that the services of local physicians form an integral part of the relief and rehabilitation work, and that their fullest coöperation is necessary to restore refugees to normal living conditions is accorded.

On the part of the Red Cross, definite time-tried and practical policies have been formulated and are strictly adhered to. For it is believed that the Red Cross can best aid the local medical profession and health authorities by providing supplies, facilities, and personnel which they lack and need for an emergency. Local men determine when there is need for dressing stations, dispensaries, medical service at refugee centers, expansion of existing hospitals, establishment of emergency hospitals, extra supplies or equipment, additional medical and nursing personnel —and the need is fulfilled. Where additional personnel are introduced to survey the area and determine critical needs, representatives of the United States Public Health Service, the Medical Service of the United States Army, and physicians with previous disaster experience frequently volunteer their services. They are used primarily for administrative purposes and not for treating the sick and injured. The latter function is left to local physicians wherever possible.

Of course, sudden crowding of a large number of people into refugee camps and various places for shelter; the contamination of water supplies, particularly in floods; the increased area of stagnant water in districts already infested with malaria; diarrheal diseases, especially in tropical climates; the sudden change from normal life in the home to crowded and sometimes insanitary surroundings in camps and other places of shelter, all form serious problems for the disaster administrative force. It follows that the official health departments are sometimes unable to cope with the situation because of insufficient funds and personnel. The public-health activities in which the Red Cross medical and nursing services are most frequently called upon to participate and assist deal with solution of these basic problems of sanitation—insuring safe drinking water; immunization and disease prevention; providing supplies such as smallpox and typhoid vaccine, tetanus and diphtheria antitoxin, quinin for the treatment and control of malaria, chlorid of lime for disinfection purposes, and crude oil for mosquito control; and providing additional hospital facilities. Refugee camps are essentially Red Cross communities or families, when established by them. The supervision of the health and welfare of the refugees, as well as the general

management of the camps, are definite responsibilities of the Red Cross.

This does not mean local physicians and official health agencies do not have access to these centers and have no responsibility toward refugees under Red Cross care and supervision. In so far as possible, physicians maintain the same relationship with refugee patients in camp and in emergency hospitals as with those outside. The public-health officials exercise the same authority and relation toward Red Cross centers of this character that they do, in normal times, toward other institutions where a large number of people are housed. The enforcement of laws and regulations governing the control of communicable diseases, the immunization of refugees in camp as well as those outside, and similar duties are assumed by the official health agencies.

Upon the Red Cross medical service, however, falls the responsibility for directing and supervising the medical and nursing service and for maintaining the health of the refugees in camp, the first-aid stations, and emergency hospitals sponsored by the Red Cross. It correlates its work with that of the local medical profession and with the official health agencies in the effort to maintain and restore the highest degree of good health among the population of the entire area. Proper coördination of all these activities and agencies is of prime importance, and here the experience of the Red Cross and the trained personnel render dual service.

It is heartening to know that there is, ready to function at a moment's notice, an efficient, trained agency prepared to answer "Here" whether the call for aid comes from next door or across the continent.

WORLD WAR VETERANS AND THE WALTER REED HOSPITAL

On July 8, 1929, there appeared in a special editorial column in the *Philadelphia Inquirer*, written by Morgan Cook, the following editorial:

Following an investigation begun in May, the Secretary of War, according to a Washington dispatch, has reported to Senator Reed of Pennsylvania, chairman of the Senate Military Affairs Committee, an amazing condition in the quality and quantity of food served to disabled World War veterans in the Walter Reed Hospital, the most important service medical center in the country. One item is significant of the general attitude of the administration of the hospital, now in the hands of a military personnel, and that is that milk, the most important article of diet for tuberculosis patients, has not been served for drinking purposes for over a year. This is almost unbelievable, but the facts as stated are probably duplicated in other hospitals where veterans are being paternally neglected by a grateful Government.

It seemed to the editor of the PENNSYLVANIA MEDICAL JOURNAL that it was only fair that this comment should be called to the attention of the Commanding Officer of the Walter Reed General Hospital, at Washington, D. C., which was done. The following is his reply thereto, and we are greatly indebted to Brigadier General J. M. Kennedy for the statement which he has made, and the opportunity it affords this JOURNAL to reply to the editorial by Mr. Morgan Cook. So often similar statements are made and those responsible for the situation do not see the charges, and therefore do not have an opportunity to reply to them.

WALTER REED GENERAL HOSPITAL,
U. S. ARMY

ARMY MEDICAL CENTER,
WASHINGTON, D. C.

July 29, 1929.

Dr. Frank C. Hammond,
1826 Pine Street,
Philadelphia, Pa.

My Dear Dr. Hammond:

I am in receipt of your letter of July 22 and am indeed appreciative of the opportunity to comment upon the editorial which you quote from the *Philadelphia Inquirer* of July 8. This quotation is an excellent illustration of a practice, unfortunately only too often apparent in certain sections of our national press, of making sweeping generalizations upon a premise of faculty or incomplete information, with no apparent effort made to verify the accuracy of the report upon which the comment is based. Mr. Cook takes as his text an unverified report "that milk, the most important article of diet for tuberculosis patients, has not been served for drinking purposes for over a year" in the Walter Reed General Hospital and thereupon proceeds to condemn the hospital administration for gross and culpable inefficiency.

As a matter of fact, milk has always been liberally used as an article of diet throughout the wards of the Walter Reed General Hospital. This is especially true in the tuberculosis wards where each patient is allowed all the milk he desires. No criticism of the diets served in the hospital wards was made at any time during the investigation referred to. On the contrary, the care and treatment of the hospital patients received repeated commendation. The sole approach to truth in the entire editorial lies in the fact that a notation of lack of milk for drinking purposes in one of the hospital messes was made by the inspecting officer in his report to the War Department. This notation, however, had reference to a single mess only, and not to the hospital diets as a whole, nor is there any reference whatever to a lack of milk for tuberculosis patients. The particular mess referred to in the notation is conducted for ambulant patients whose convalescence has reached a point where they no longer require special dietetic treatment and who are able to leave their wards and walk to the mess hall. In this mess they receive a liberal and varied general diet, the daily caloric value of which is based upon 3,500 calories per patient. On account of the high caloric value of this diet, the hospital mess officer has been accustomed to serve, in this particular mess, coffee and tea as beverages rather than milk. The inspecting officer considered, however, that milk should be fur-

nished as a beverage here, as in other messes of the hospital, and in compliance with War Department instructions, this addition has since been made. Tuberculous patients do not eat in this mess, and the inspector found no cause for criticism in the diets served in the tuberculosis section.

Mr. Cook's comment on the fact that the administration of the hospital is "now in the hands of a military personnel" is most remarkable when it is considered that the Walter Reed General Hospital is an Army General Hospital established by the War Department for the care and treatment of officers and soldiers of the Regular Army and has always been administered and staffed by the Medical Department of the Army. The hospital functions as an integral part of the Army Medical Center in this city. Since the World War, the War Department, at the request of the U. S. Veterans Bureau has allotted a limited number of beds for the hospitalization of the beneficiaries of the Veterans Bureau and these patients are given, in all respects, the same care and attention as are the military patients from the Regular Army. The present allotment for Veterans Bureau patients is 400 beds.

While the Walter Reed General Hospital has a tuberculosis section comprising approximately 60 beds, it is not the policy of this institution to furnish definitive treatment for patients suffering from this disease except in the case of surgical tuberculosis. For cases of pulmonary tuberculosis, this hospital functions as a diagnostic clinic only, and confirmed cases are sent to sanatoria for definitive treatment. Military patients are transferred to the Fitzsimons General Hospital, Denver, Colorado, and Veterans' Bureau patients to tuberculosis sanatoria designated by that Bureau. While awaiting transfer, however, all tuberculous patients receive the usual sanatorium care in the form of hygienic and dietetic treatment. Emergency conditions arising are treated by special measures as indicated. Cases requiring thoracoplasty and other surgical procedures are given such treatment on the Surgical Service of this hospital.

The dietetic treatment on the tuberculosis wards has always received the careful supervision of the hospital authorities and has been satisfactory to both inspectors and patients. Milk, eggs, and meats are considered the most important foods for these patients and form the basis of the diet, supplemented by a liberal allowance and variety of fresh vegetables and fresh fruits. Milk is furnished in any amount desired by the patient but each patient is urged to drink at least three pints daily. In addition to milk all patients receive a large helping of butter with each meal and cream as desired for cereals, coffee, and desserts. Eggs are furnished daily in numbers and mode of preparation as desired by the patient. Meats are served twice daily. The preparation and serving of meals on this section is given special attention and every effort is made to give these patients an attractive and appropriate dietetic regimen. That the hospital has succeeded in this effort is best shown by the fact that no adverse comment on the tuberculosis diets has ever been made by the annual visiting inspecting officer, and by the rarity of complaints made by tuberculous patients on this section, who as a class, are proverbially hard to please and very prone to manifest the abnormal psychology which so often accompanies chronic invalidism.

The Medical Department of the Army is very proud of the reputation for efficient administration and professional excellence which the Walter Reed General Hospital has attained in recent years, both throughout the military service and in the civilian population of the country. It is very jealous that this reputation be maintained, and if possible, increased. It does not, naturally, claim perfection and constructive criticism is always welcome. It is, of course, to be expected that the conduct of all Government institutions should be periodically subjected to investigations of various kinds. This is especially true of Government hospitals, for obvious reasons. In so far as these investigations are constructive, they are beneficial both to the institutions themselves and to the welfare of the patients under treatment therein. Most important of all, however, is the purpose they serve in keeping alive in the consciousness of the public at large the sense of personal and public responsibility for the efficient conduct of Government institutions, and to bring home the realization that such institutions are but agencies established by the public itself to carry out definite national obligations. With this responsibility, the public is entitled to know the actual facts brought out by such investigations. The report of the inspector to the War Department in the recent investigation to which the *Philadelphia Inquirer* refers, was, in general, a commendation of the present hospital administration. Certain minor changes in administration were recommended but these were entirely of a trivial nature and largely a matter of opinion.

In view of the actual findings as set forth in the report of the inspecting officer to the War Department, it is most unfortunate that statements so much at variance with the facts as those contained in the editorial quoted should be widely disseminated through the public press. It would be, for example, very difficult for the reader of Mr. Morgan Cook's editorial, and who had otherwise no access to the facts in the case, to believe that the Walter Reed General Hospital is constantly filled to capacity, with an extensive waiting list, and that the great majority of patients who have been under treatment in the hospital have nothing but praise for the institution.

Thanking you again for permitting me to furnish you with the above comment, I am

Most sincerely yours,

J. M. Kennedy,
Brigadier General, Medical Department,
Commanding.

In order that an opinion might be obtained in regard to the position occupied by milk as a dietary item in the treatment of tuberculosis, a letter was sent to several well-known members of our State Medical Society who are devoting their entire time to the treatment of tuberculosis. The following are some of the replies received:

"It is my opinion that milk does occupy a rather important place in the dietary list of this sanatorium, as one of the rather easily assimilated foods, which contains not only the principal food elements in proper proportions, but minerals and vitamins as well. We do not use milk with the idea of forced feeding or stuffing tuberculous patients, but rather to insure good nutrition. I cannot believe that our veterans at Walter Reed Hospital, or any other hospital which cares for our sailors and soldiers, are subject to neglect, and most certainly not in the matter of food, as the reports that I receive from our own service men who have been at other institutions as a rule are commendatory."

"After many years of experience in feeding the tuberculous, I am convinced that milk is an excellent food

but does not have any peculiar virtues not possessed by other foods. A given amount of milk has a certain food value and nothing more than that. The only advantage I have found in milk as a food for the tuberculous is the fact that it is a liquid, and patients can often be persuaded, particularly in hot weather, to take liquids when they cannot be persuaded to eat solid food. It is more uniform in composition than most other articles of food. Aside from that, I do not believe it possesses any specific advantages, and I think that with proper dietetic care patients can be fed satisfactorily without the use of milk. It is an easy food and a labor-saving food from the standpoint of those whose duty it is to administer it."

"Regarding your question about the value of milk in the dietary regimen of tuberculous patients, I think you will find that the general impression at present is against the reckless overfeeding and stuffing of these patients which was practiced some twenty years ago, and that, as a rule, in fairly robust patients nutrition is best maintained by a well-balanced, varied diet, but my feeling is, very strongly, that milk, in moderate quantities, is of the greatest value if employed routinely, and with most patients is practically indispensable as a most important part of the dietary."

"I consider it a very valuable part of the dietary of tuberculous patients. It may be given with meals or between meals and is a useful substance to amplify the diet in those who are, so to speak, 'small eaters.' I should feel very much handicapped in the care of tuberculous patients if it were not possible to plan a dietary containing milk, although this need not be the essential substance. Although forced feeding is no longer considered desirable; nevertheless, a simple, plain, nutritious diet of ample proportions is important and in the planning of such a diet milk plays an important part."

"Experience leads to the belief that milk is a splendid article of diet for practically everybody, but that it is no more important in tuberculosis than are the other staples. Milk is a good food and when properly handled can easily be used as extra food for any person in need of more nourishment than can be taken in the usual way at mealtime. There still remains considerable popular faith in the old theory that it is specially indicated in tuberculosis but I believe that you are not likely to find any up-to-date physician willing to use it to excess as was done twenty years ago."

THE INTOXICATED AVIATOR

It is most unfortunate that catastrophes of all grades must occur before legislation is adopted to restrict their occurrence or punish the violators. Numerous instances may be cited. It was only after a number of children were killed in a fire in a public school where the front doors opened in, that laws were adopted in the various states requiring the entrance doors in public buildings to open out. Since the holocaust at the Cleveland Clinic, there has been much agitation upon the need for legislation to require proper storage of x-ray films, although continuous warnings had been issued in the matter previously.

The various states have legislation that provides punishment for the individual who drives an automobile while intoxicated. Much has been written upon the best tests to determine whether or not a person is intoxicated, but it would appear that none of the states has anticipated what punishment should be meted out to an intoxicated aviator.

In June a crash occurred in a field in Delaware, and it was ascertained that the aviator was drunk. Both he and the two passengers escaped injury. As there are no laws in Delaware by which the drunken aviator could be held, the buck was passed to the Federal Government, which we understand has no such laws, either.

There have been other aviation tragedies, of which possibly some were due to an intoxicated pilot. In July, Wilmer Stultz, one of the trans-Atlantic heroes, connected with a Pennsylvania airport, who was killed with his two passengers, personal friends, in an airplane accident near Roosevelt Field, was declared, upon official investigation, to have been "very drunk at the time of his death." An autopsy showed "a large amount of alcohol in the stomach and brain," and "alcohol in the liver and kidneys." It is of interest to note that in this condition Stultz was "stunting" at an altitude of three hundred feet, a tail spin occurring at the end of a "falling-leaf" drop. The district attorney of Nassau County, New York, announced, after the investigation of this accident, that he would initiate a campaign against drunken flying at the fields in his county, notwithstanding the belief that there is little intoxication on the part of pilots.

There should be definite rules adopted by all the states and by the Federal Government in regard to this very important situation. A pilot should be required to report to some one in authority at an airport, before being permitted to take up a plane. In this way, an obviously drunken pilot can be detected.

The public is asked and urged to support aviation, and to become air-minded. If there is any bad spot, the public is entitled to know the truth, and the force of public opinion should have great weight in correcting any such evil. A drive should be made against speakeasies and other sources of supply of liquor to aviators.

It appears that "Stultz was a free lance pilot, but had the use of Roosevelt field. Not being connected with the flying corporation in any way, he was required only to comply with the field's rules regarding landing, take-off, and air-traffic regulations." In view of occurrences, it would seem advisable that all pilots, "free lance" or otherwise, should be required to report in person to some one in authority at the field, before being permitted to "take off," and

the person in authority should satisfy himself as to whether or not the pilot before him is in a satisfactory condition to assume charge of a plane.

Is the plane airworthy and the pilot capable? These two questions are good ones to ask before you take an airplane ride, and they are easily answered. First look at the plane's wings or rudder for its Department of Commerce identification number. Prefixed by "C" or "NC" (such as C-156 or NC-647), this number signifies that the plane has passed rigid government tests. Second, ask the pilot if he is licensed. Pilots who cannot exhibit either a "transport" or a "limited commercial" license are breaking the law if they take up passengers for hire, and should be reported to the nearest authorities. But how about taking friends—not for hire? Together with unauthorized planes, says *Popular Science Monthly,* they account for the major part of air accidents.

THE TEACHING OF OBSTETRICS

At the Portland session of the A. M. A., discussion in the House of Delegates on the supplementary report of the Reference Committee on Medical Education and Hospitals led to the adoption of the following resolution:

Resolved, That the House of Delegates request the Council on Medical Education to investigate the present teaching of obstetrics in this country and make such recommendation for increasing the clinical teaching hours as the results of its investigations may warrant.

The preamble to the resolution which gives the reason for the introduction of the resolution, and which itself was not adopted, is as follows:

Whereas, The time allotted for the teaching of obstetrics in the curriculum of the several medical schools has been cut down and is inadequate to drill the student thoroughly in this important major, be it resolved

In the present-day scheme of medical education, the medical-school curriculum for the four years of the course shall not consist of more than 4,000 hours. Many of the schools have adopted a curriculum with less hours, and in a few instances considerably less.

The course of instruction is so divided that a percentage in maximum and minimum number of hours is recommended for each subject. In figuring the percentage of hours for obstetrics, the subject is combined with gynecology.

The reason for introducing the resolution is laudable. There is much that is included in some of the other major courses that could be deleted. For instance, the time devoted to the teaching of the major operations in general surgery and the surgical specialties is a waste of time. It is questionable whether the course in operative surgery should be continued, either on cadavers, animals, or both. Part of the hours that would thus be conserved might well be utilized as additional hours in teaching obstetrics.

No recent graduate should attempt the major surgical procedures until he has served his apprenticeship in the operating room for the required length of time to train him satisfactorily. Those individuals with an aptitude and dexterity will acquire the technic more quickly than their less fortunate associates.

But, as to obstetrics, every practitioner "does confinement work," at least in the beginning of his medical career. He must do forcep applications, versions, genital repair, etc. Many general practitioners will do any or all of these major obstetrical manipulations, who would not for one moment attempt major surgical operations. Yet every delivery should be safeguarded the same as a major operation. They are really major procedures. Obstetrical morbidity and mortality is considered to be as high today as thirty years ago. There are several reasons to explain this, notwithstanding that obstetrics is better taught now than then. But, in the shrinkage of the medical curriculum, the teaching of obstetrics is one subject that should be permitted as many hours as are deemed necessary to instruct the undergraduate properly, and thus conserve the human race.

MEDICAL EDUCATION VERSUS MEDICAL PROPAGANDA

In any field of endeavor, when there is a desire to arouse public consciousness two distinct methods of procedure appear—propaganda and education. That physicians may be guilty of using propaganda is an open question, not at the expense, however, of ethical procedures nor intentionally, but by virtue of the fact that we have not been able to differentiate propaganda methods from those of true educational procedures, nor sense their respective value.

Everett Dean Martin, writing on our "Invisible Masters," condensed from the *Forum* (March 29th) by the *Readers' Digest* (April), gives food for thought and guidance to medical groups interested in arousing the public interest in individual and county health problems: to wit, "The educator aims at the slow process of development: the propagandist at quick results. The educator tries to tell people how to think: the propagandist what to think. The educator strives to develop individual responsibility: the

propagandist mass effects. The educator wants thinking: the propagandist action. The educator fails unless he achieves an open mind: the propagandist unless he achieves a closed mind."

With this differentiation before us, it would appear that education of the public in matters pertaining to individual health and health problems will be more lasting, more permanent, than a mass attack with propaganda. If this be true there can be only one proper approach to acquainting the public and the individual with health needs, and that is through systematic courses of instruction in our private and public schools, colleges, and universities. Of course, this applies to those individuals engaged in the pursuit of academic training. For those who are beyond reach of the school and college, the hope for adult education rests with our efforts through the medium of the public press, current periodicals, plays, movies, the drama, yea, even the pulpit itself.

JOTS AND TITTLES

Science and Research

The splitting of hydrogen into two gases with different properties was demonstrated on September 10th before the American Chemical Society meeting at Minneapolis, by Dr. K. F. Bohnhoeffer. This is hailed as a revolutionary development which will necessitate the rewriting of chemical textbooks.

British scientists, according to Prof. Leonard Erskine Hill, of University College, London, have developed a method of preparing a toxin from bacteria which, if as fatal to men as to guinea pigs, would require only a teaspoonful to kill a million.

Discovery of a commercial process for making beta anhydrid lactose, a form of milk sugar which is sweeter and much more soluble than the present commercial form, was announced at the meeting of the American Chemical Society in Minneapolis by Dr. R. W. Bell, of the research laboratories of the Bureau of Dairy Industry, United States Department of Agriculture, by whom the process was developed. Dr. Bell believes the new process will increase the demand for milk sugar because of the economical method of manufacture and the availability of the sugar in a more desirable form.

Prof. E. Newton Harvey, of Princeton University, on August 22d demonstrated before the Thirteenth International Physiological Congress, meeting in Boston, his method of reviving by means of supersound waves the heart beat in a frog heart removed from the body. These waves have a vibration ratio of 300,000 to 2,500,000 per second—too rapid to be audible. He stated that the method is not practicable for resuscitation because the waves would be absorbed by the body tissues before reaching the heart.

Cycopropane, the new anesthetic prepared by Professor V. E. Henderson, of the University of Toronto, and Dr. G. H. Lucas, of Philadelphia, was described at the International Physiological Congress as being similar in soporific power to nitrous oxid, acting promptly and leaving no bad after-effects.

Drs. Edwin J. Cohn, Thomas L. McKeekin, and George R. Minot reported at the International Physiological Congress the extraction of a liver fraction which contains the substance curative in pernicious anemia.

On tubes and dishes of culture media, taken aloft by airplanes and exposed in the upper strata of air, bacteria developed in forty per cent of the exposures, demonstrating that disease organisms may be carried for long distances by air currents at a high altitude. This may account for the development of epidemics unexplained otherwise. This work was directed by W. A. R. Dillon Weston, of the School of Agriculture of Cambridge University. The purpose was primarily to study dissemination of plant diseases, but the application to animal and human diseases is obvious.

By means of a device they have named the "Cin-Ex" camera, three medical men of Detroit, assisted by an expert mechanic, have finally succeeded in producing satisfactory x-ray "movies" of the interior workings of the body on a continuous roll of film. This process is confidently expected greatly to aid progress in the study of disease, particularly of the heart, stomach, and intestines.

At the Sydney (Australia) Medical Congress, on September 12th a device was exhibited which is claimed to produce remarkable results in the restoration of persons apparently dead. The principle of the device is based on stimulation of heart muscles by plunging an electrically charged needle into the heart for ten seconds.

Acids introduced into the digestive tracts of dogs during a period of weeks, and absorbed through the intestines into the blood stream, reduced the red blood count remarkably and produced a temporary condition resembling pernicious anemia. These experiments were reported at the International Physiological Congress by Dr. W. N. Boldyreff of Battle Creek, Michigan. The laboratory tests were made by Ephraim Boldyreff.

That morphin addiction disturbs the water distribution in the tissues was reported to the International Physiological Congress by Drs. H. G. Barbour, B. E. Russel, S. H. Flowers, E. S. Dunham, and L. G. Hunter, of Louisville. In the addict there is less than the normal quantity of water in the interior organs and more than the usual water content in the organs with which contact with the outside world is maintained. Sudden withdrawal causes an abrupt readjustment of the water balance, which accounts for the symptoms experienced when addicts are subjected to too sudden a "cure."

Dr. W. N. Boldyreff, of Battle Creek, Michigan, is of the opinion, as a result of animal experimentation, that the external pancreatic secretion may serve as a valuable addition to insulin in controlling the blood sugar, being absorbed into the blood through the intestinal walls.

That growth is better maintained when children are fed a high protein ration has been demonstrated by experiments conducted by Dr. Chi Che Wang, Bernice Huddlestun, and Irving Graef, of the University of Chicago.

Isolation of a male hormone was reported by Dr. Casimir Funk, of Paris, and Dr. Benjamin Harrow, of the College of the City of New York, at the International Physiological Congress. The extract has been employed so far only in animals, but clinical experiments on humans will be conducted in New York.

Experiments on transplanted tumors in rats were reported by Dr. Boris Sokoloff, professor of experimental medicine of the Russian University of Prague, Czecho-Slovakia, now working as a guest with the Institute of

Cancer Research of Columbia University. Injection into the tumors of a compound of the extract of the cortex of the suprarenal glands with iron and pyrrol in about ten per cent of all attempts on over a thousand experimental animals has caused the tumors to liquefy and disappear, while having no effect on the normal cells surrounding. Out of 200 rats apparently cured of cancer, after two months only five had a recurrence. The treatment with "corferrol" was based on the theory that cancer develops due to lack of proper oxygenation of the parts. Corferrol supplies such an excess of oxygen to the cancer cells that they stifle. The technic has not been applied to spontaneous tumors, and is not sufficiently developed for application to human subjects.

In the annual report of the Ross Institute and Hospital for Tropical Diseases in London, recently issued, it is announced that "by means of the blood serum which he discovered some years ago, Dr. J. A. Shaw-Mackenzie has been able to indicate not only the presence of cancer in obscure cases but, what is no less important, its absence in suspected cases.....It has been ascertained that the changes in the blood continue for a time after the removal of the tumor by surgical operation, but recovery is shown by the gradual return of the blood to normal. In other cases the reaction persists or becomes evident again in cases of later recurrence of the disease." According to Dr. Shaw-Mackenzie, these changes are concerned mainly with defective enzyme action and digestion of fats. An independent investigation by Prof. W. C. McCullagh Lewis and Mr. Robert F. Corran, of Liverpool University (*Biochemical Journal*, May, 1928) confirms Dr. Shaw-Mackenzie's discoveries. According to the report quoted, it has been demonstrated that pancreatic co-enzyme, sodium oleate, bile salts, and other activators increase the fat-splitting enzyme, lipase, both within and without the body, and not only increase the circulating lipase but aid in removing inhibitory bodies such as cholesterol and other substances.

Martyrs to Undulant Fever

Tragedy has constantly stalked the research scientists who have volunteered to study the elusive germs of undulant fever—the "slipperiest" of diseases, as it has been called. Undulant fever, sometimes called Malta fever, has always been considered particularly dangerous to laboratory workers. Dr. W. T. Harrison, officer of the United States Public Health Service on duty at the Hygienic Laboratory in Washington, is the latest to be attacked. He is the fifth worker at this Government laboratory to have been infected while delving into the mysteries of this particular disease. Dr. Harrison was working with the blood of Dr. Edward Francis, fourth martyr in this piece of medical research. Dr. Francis contracted the disease after Miss Alice C. Evans, another Government bacteriologist, had died. Previous casualties were those of Dr. G. C. Lake and B. T. Sockrider, laboratory assistant. The germ responsible for undulant fever seems impossible to dodge, no matter what precautions are taken in handling it in the laboratory. At the Pasteur Institute in Tunis, North Africa, where undulant fever has been studied in its native habitat for several years, this sign is tacked on the door leading into the laboratory where the work is being carried out: "All who enter here do so at their own risk." Many gallant workers have entered at their own risk, and have died. To tell the story of the string of recent catastrophes in the United States, the picture is made clearer by starting with the case of Miss Evans. She was caught by being splashed with some of the dangerous germs received in a broken vial from Tunis, five years ago. At least this is the way she believed she became infected.

Druggists Recommending Purgatives for Abdominal Pains

A few years ago Dr. J. O. Bower made a study of 1,000 case reports of appendicitis patients at the Samaritan Hospital, Philadelphia, in order to determine what recommendations should be made to lower the mortality in this group of patients. It was ascertained that too frequently the attending physician was holding the patient too long at home, and that purgatives were universally given, the attending physician very often being culpable. As a result of this survey, a letter was sent to the physicians referring their patients to the hospital, urging them to realize the necessity for early diagnosis and early operation, and to withhold purgatives in acute abdominal pains. As a result, the mortality for acute abdominal conditions in this hospital has been greatly lessened. The result of this study was used by Temple University for broadcasting publicity, urging the people to avoid the use of purgatives when suffering with acute abdominal pain, and to send for their doctor immediately.

The *P. A. R. D. Bulletin* for August published a letter from Dr. Hubley R. Owen, chief surgeon of the Department of Public Safety, Philadelphia, cautioning or attempting to prevent the retail druggists of Philadelphia from recommending castor oil and other drastic laxatives in cases of abdominal pain. He said that 80 per cent of the policemen and firemen operated on by him for acute appendicitis stated they had been given castor oil, salts, etc., at various drug stores because of a complaint of abdominal pain.

This letter was presented at the July meeting of the Philadelphia Association of Retail Druggists. In the discussion it was not considered likely that druggists advised castor oil in 80 per cent of the cases, but rather it is the people who go to the drug stores and ask for a dose of castor oil on the advice of a physician, relative, or friend. Be that as it may, the propaganda was put across to show the druggist why he should not promiscuously recommend purges and drastic laxatives for abdominal pain.

Medical Education in the United States

Under this caption in the *Journal A. M. A.* for August 17th appears the annual presentation of educational data for 1929 by the Council on Medical Education and Hospitals. This report is of general interest to our members, as it affords a statistical study of medical education in this country of which all practitioners should have general information. There are now 80 approved schools.

All medical schools heretofore rated as class-B either have been advanced to the class-A rating or have ceased to exist. In 1928 Temple University School of Medicine, at Philadelphia, and Queen's University Faculty of Medicine, Kingston, Ontario, were granted the class-A rating, and this year Laval University Faculty of Medicine, at Quebec, and the New York Homeopathic Medical College were advanced to class-A. The two homeopathic medical schools now in existence are teaching pharmacology and therapeutics the same as other medical schools, in addition to homeopathic drugs.

The total number of medical students in the United States for the year ending June 30, 1929, was 20,878, an increase of 333 over last year. The total number of graduates for the year were 4,446, or 184 more than last year. The average of the graduates was 26.3 years.

Of the graduates, 2,951, or 243 more than last year, had also obtained degrees in arts and sciences. During the year there were 925 women students, four less than the year before. There were 214 women graduates, seven more than last year; 827 per cent were matriculated in and 91.1 per cent graduated from the coeducational colleges.

As the cost of conducting medical schools has increased, there has also been an increase, and properly so, in the tuition fees.

During the past nineteen years, out of 67,198 students enrolled, 11,722 did not go on to graduation. Of these, 65.6 per cent dropped out in the first year, and 22.6, 9.0, and 2.8 per cent respectively dropped out in the second, third, and fourth years.

MEDICOLEGAL AND LEGISLATIVE NOTES

Ether Supply Watched Closely by Government Chemists.—The recent seizure of ether at Boston and Providence by the Food, Drug, and Insecticide Administration of the United States Department of Agriculture has brought from the Department the statement that the sampling of ether on the market is carried on continuously and extensively by inspectors and chemists of the Administration. The technic of the manufacture and packaging of ether has not yet been perfected to a point where there is absolute assurance that ether meeting every requirement at the time of packaging will not upon standing deteriorate to a point where it will not meet the standard of the U. S. Pharmacopœia. This situation necessitates very frequent and comprehensive inspection in order to prevent the consumption of substandard ether. The Administration adheres to the specifications set up by the U. S. Pharmacopœia, and ether failing to meet these standards is in violation of the law if shipped within its jurisdiction. For several years, the utmost care has been maintained to safeguard the country's supply of ether, and the seizures recently made in New England are only a few of the numerous detentions that have been made. Thousands of samples of ether have been tested in connection with this survey during the past year, and testing will be continued.

Bill Introduced to Regulate Tobacco Industry.—United States Senate Bill 1468, introduced by the Hon. Reed Smoot on June 4, 1929, would amend the Food and Drugs Act of June 30, 1906, to cover tobacco and tobacco products. It would further empower the Food, Drug and Insecticide Administration of the U. S. Department of Agriculture to control the advertising of the products coming under its authority as well as the labels and literature inclosed with the packages. This bill is aimed to establish a means of controlling the advertising of the American Tobacco Company which is so widely addressed to young people and appears to be increasing the smoking of cigarettes at an alarming rate.

According to an address of Mr. Smoot delivered before the Senate June 10, 1929, a number of states have adopted or are considering restrictive legislation, as follows: "In Illinois a bill has been introduced in the general assembly for the restriction of advertising which urges young people to smoke cigarettes. A similar measure is before the senate of that state. A bill to prevent the advertising of cigarettes through the radio and on the billboards, introduced February 12th, is now before the Idaho State Senate. The laws of the State of Maine have put tobacco in the class with poisons and narcotic drugs. In the State of West Virginia, tobacco is placed by statute in the class with opium. In Michigan a bill has been offered in the lower house against advertising designed to promote the sale of cigarettes to women. In the State of Utah, billboard and street-car advertising of cigarettes has been made a misdemeanor. In Mississippi, Dr. W. F. Bond, State Superintendent of Education, is calling for a nation-wide effort to combat the millions of dollars that cigarette manufacturers are spending for propaganda. In California schools are required by law to instruct children as to the injurious effects of tobacco, and the sale of cigarettes is forbidden to any girl or boy under the age of eighteen. In practically every other state of the Union, public disapproval of cigarettes for minors is expressed by law in one form or another."

Automobile Licenses May be Revoked.—According to Benjamin G. Eynon, Commissioner of Motor Vehicles, Harrisburg, Pa., his bureau has been given the right, through the State Highway Patrol, to revoke the registration of any automobile deemed unsafe for unfit operation. The following defects are subject to revocation: A steering mechanism so loose as to permit wheels to oscillate. A bent or broken radius rod. Subjection of a vehicle to misuse, neglect, or accident which so affects its stability or reliability that it will not withstand normal strain or road shock. Lack of adequate brakes, lamps, horn, mirror, windshield wiper, muffler, or tires.

The State Highway Department in October will stage an inspection of motor vehicles in conformity with the new State act passed at the last session of the Legislature, which requires such an inspection each year between October 1st and November 15th.

A tremendous number of fatal motor accidents each year are due to mechanical faults in the car. This is more especially noticeable at this time of the year, after the vehicle has been used to a great extent during the summer and has not had a proper overhauling.

The 1929 General Assembly gave the Governor authority to proclaim compulsory inspection periods, during which *every owner of a motor vehicle registered in Pennsylvania must submit that vehicle to an inspection*, at a designated official inspection station. It will be unlawful to operate an uninspected vehicle during the thirty days following the inspection period, under penalty of arrest. Any car found unsafe or unfit for operation must be put in safe condition or the registration will be withdrawn. The owner pays the cost incident to the inspection.

Death by Monoxid Poisoning.—In an opinion recently rendered, the Workmen's Compensation Board decided in the case of an automobile mechanic frequently exposed to carbon-monoxid gas and from which bronchial pneumonia resulted which caused his death, that he was injured by accident and therefore his dependents are entitled to compensation. The case was that of Margaret Driscoll *vs.* McCalister Brothers.

Injury by Impact of Granite Particles on Granite Cutter's Lungs Held Compensable.—Evidence tending to show the tangible impact of granite particles upon a granite cutter's lungs producing definite damage to his body was held compensable under the Massachusetts statute in Sullivan's Case; 164 N. E. 457. The Supreme Court said that the "personal injury" for which alone compensation is payable under the act might have been found to be due to physical

deterioration flowing immediately from corporal collision with a foreign substance set in motion by the business of the employer performed by the employee by virtue of his contract for service. It might have been found to be as tangible as a broken bone. Although this result may be termed "granite cutters' disease," that factor is not decisive that it was a disease rather than a personal injury under the statute. Its nature in that respect must be ascertained from an analysis of the physical condition which in truth resulted and not from mere nomenclature. The personal injury may be none the less the direct and consequential result of the employment, although a condition may arise termed in some connections a disease.

Blood Donors Must Be Licensed.—The New York Health Department has announced its decision to require that donors of blood for transfusion must be licensed. The decision was made because of irregularities in certain blood-transfusion agencies, and to insure that only blood of good quality is used.

PHYSICAL THERAPY

Physical Therapy or Physiotherapy?

The definite establishment of a separate branch of medical endeavor, known variously as physical therapy, physiotherapy, physical therapeutics, and physicotherapeutics, leads one to ponder upon which of these is the best term for usage by the medical practitioner. A review of the recent literature shows that the term now most often used by reliable contributors on the subject is *Physical Therapy*. "Physiotherapy," a coined word much used in the past, has fallen rather into disrepute, and it seems to carry with it a taint of quackery far removed from the present scientifically practiced physical therapy.

Dr. William H. Walsh has sounded the keynote by suggesting the exclusive use of the term "physical therapy" and the elimination of the term "physiotherapy," and we feel that he is justified in so doing.

The other terms mentioned, while not particularly objectionable, seem a little too long for universal adoption. We, therefore, suggest the use of the term "physical therapy" exclusively.

Three Quotations on Physical Therapy and Their Significance.—In the year 1759, the great John Wesley, in his most interesting and quaint booklet entitled *The Desideratum, or Electricity Made Plain and Useful by a Lover of Mankind and of Common Sense*, quoted a certain Mr. Lovett as saying, "The electrical method of treating disorders cannot be expected to arrive at any considerable degree of perfection till administered and applied by the Gentlemen of the Faculty" (referring, of course, to the physicians of that time).

Wesley then continued, "Nay, then—all my hopes are at an end. For when will it be administered and applied by them? Truly—not till the Gentlemen of the Faculty have more regard for the interest of their neighbors than their own. At least not until there are no Apothecaries in the land; or till physicians are independent of them. And if a few of these lovers of mankind who have some little knowledge of the animal economy would only be diligent in making experiments and setting down the more remarkable of them, in order to communicate them to one another, that each might profit by the other's labour, I doubt not, but more nervous disorders would be cured in one year, by this single remedy than the whole English Materia Medica will cure by the end of the century."

Again, Hector Colwell states: "In a work published in 1886 the statement is made that the then existing insufficient knowledge upon the application of electricity to the treatment of disease is due 'to the want of all teaching upon the subject in most of the medical schools.'"

Electrotherapy is only one branch in the great field of physical therapy, yet these two quotations show the constant apathy of the medical profession toward at least one phase of physical therapy.

Coming up to modern times, a third quotation gives the same indictment. In a recent issue of the *Journal of the American Medical Association*, a reviewer, in referring to physical therapy, makes the following statement: "The subjects are generally studied inadequately or not at all in medical schools. One of the excuses given for the neglect of these important topics in the medical school has been the lack of a suitable textbook. Unfortunately, the real cause for the neglect of physiotherapy is the ignorance of the framers of medical school curriculums regarding it. As the students of the present become the curriculum makers of the future, we have here a vicious circle."

Time and again, members of the medical profession make the statement that the reason for the existence of the various cults is because of the lack of interest on the part of the legitimate physician in various physical-therapeutic measures. The statement has been made that the average physician is too lazy or too busy to use diathermy, actinotherapy, phototherapy, and other forms of physical therapy in his practice. We feel certain that this is *not* the case. The average physician is certainly not lazy nor is he too busy to apply those therapeutic measures with which he is familiar. The trouble is that he *does not know* physical therapy, and the reason that he does not know it is because he has never been taught it in his undergraduate course.

When will the medical profession arouse from its apathy, stop talking, and act?

When will we realize that there may be something more to the practice of medicine than the use of drugs and surgical procedures?

When will our medical schools introduce into their undergraduate curricula adequate, well-conducted courses in the physical means of treating disease?

The three extracts quoted above, covering a period of almost two centuries, point to our continued apathy. Let us hope that before another two centuries have passed some of the medical profession will become sufficiently aroused to persuade our curriculum makers to act!

PUBLIC HEALTH

For Backward Children.—Subnormal and backward children in special schools and classes maintained by city school systems increased from 10,890 to 51,814 during the thirteen years, 1914 to 1917, according to the United States Bureau of Education. The number of special classes in city schools for children of lower mentality has about doubled in ten years. The large growth in schools and in enrollment does not indicate that feeble-mindedness is on the increase, but that better provision is made for the care and instruction of such children. The statistics of the bureau included 51 state institutions, 30 private institutions, and 218 city day schools. Enrollment in state schools for subnormal children increased in thirteen years from 27,962 to 49,791; enrollment in private institutions increased from 916 to 2,416. The number of instructors reported

by state schools increased from 381 in 1914 to 580 in 1927; in private schools, from 116 to 195, and in city schools, from 650 to 2,718. State schools report employment in 1927 of 4,047 assistants, and private schools of 435 assistants. Subnormal and backward children in city schools are usually of higher mentality than those in state institutions, and are in school only during the period of instruction. City schools, therefore, report no assistants. Sex distribution is about the same in State and private institutions, but city schools enroll about twice as many boys as girls. In order to make these handicapped young people as nearly self-supporting as possible, they are taught music, household arts, agriculture, manual training, and certain trades, in addition to the usual academic subjects.

School Program for Children with Cardiac Affections.—In order that the child with a damaged heart may not suffer the loss of an education, cardiac classes have been established in schools in various places and in some hospitals. The following program (First Report of the Association for the Prevention and Relief of Heart Disease. Reproduced by Wood and Rowell) was inaugurated at Public School 64 in New York:

8:30 to 9: Arrival. Given cup of warm bouillon.
9 to 9:15: Rest in reclining chairs. Observation by nurse to determine pulse rate, temperature, and other physical conditions.
9:15 to 10:15: School program.
10:15 to 10:35: Recess.
10:35 to 12:15: School program.
12:15 to 12:45: Lunch period; warm lunch served.
12:45 to 1:45: Rest period for all children in reclining chairs.
1:45 to 3: School program, including specialized physical-training exercises which are arranged in accordance with the recommendations of the cardiac specialist in charge of the child.
3 to 3:15: Rest in chairs. Observations of temperature and pulse rate.
3:15 to 4:15: After-school recreation period, outdoor in pleasant weather.
4:15 to 4:30: Hot drink, in cold weather, or cracker and milk in warm weather.
4:45 to 5: Dismissal. Walk home or transportation by bus. Dismissal earlier in winter.

When the organization of special classes is not possible, Wood and Rowell state that the New York City Board of Education issues special instructions to cover such cases. Schools are instructed to: (1) Issue special passes to permit such pupils to use special entrances and exits. (2) Permit these children to enter or leave school directly before or after the regular time schedule for normal children. (3) Excuse children with cardiac defects from physical training, fire drills, etc.—*Public Health Reports.*

The Role of the Vaccination Dressing in the Production of Postvaccinal Tetanus.—Among 116 cases of tetanus investigated after vaccination, it was found that all had developed following primary "takes" which had been covered for all or part of the time of their active course by some type of dressing strapped to the vaccination site. With the exception of an outbreak of postvaccinal tetanus in 1917, traced by McCoy and Benington to the use of infected bone scarifiers, and of seventeen cases traced by Armstrong to the use of infected bunion pads, the sources of the invading tetanus organism are unknown. Prolonged search by various workers at the United States Hygienic Laboratories, using various and approved methods, has failed to demonstrate B. tetani in commercial virus or in any of the various vaccinal material other than above noted.

Now, whatever may be the sources of the contamination, there is no apparent reason for assuming that tetanus germs gain entrance only to primary "takes" which are covered with dressings; yet postvaccinal tetanus has in our experience been confined to this type of vaccination. It seems, therefore, that other conditions, in addition to the presence of the B. tetani, are essential before postvaccinal tetanus will supervene, and that these conditions are supplied when a dressing is strapped to a primary "take." Francis, Anderson, and Armstrong demonstrated that animals are extremely resistant to attempts to produce postvaccinal tetanus by vigorously rubbing an intentionally tetanus-contaminated vaccine virus upon the abraided skin, when the lesions were left uncovered. Armstrong, however, showed that monkeys and rabbits when thus vaccinated become quite susceptible to the complication, provided a shield or dressing is retained on the vaccination site.

The deleterious influence of dressings is also indicated by the decrease in the number of cases of postvaccinal tetanus since the Public Health Service instituted a campaign against dressings. It, therefore, becomes a matter of importance to determine, if possible, just how the dressing creates conditions at the vaccination site suitable for the development of tetanus. Anaerobiasis being a necessary condition for the multiplication of B. tetani, it is natural to assume that the dressing exerts its malign influence directly by excluding air. It is to be remembered, however, that most shields have some provision for ventilation, and the facts indicate that exclusion of air by the dressing was not the most important consideration. However, every one of the series of 116 cases of postvaccination tetanus occurred in individuals in whom some type of dressing was fixed to the vaccination site. This would indicate that this difference is significant and perhaps all important. In openly treated vaccinations the continued wiping and ventilating action occasioned when the arm is moved within the sleeve or under the bed clothes tend to keep the lesion dry and cool, as compared with those covered by a dressing, thus favoring a firm vesicle, which is the best insurance against exudation as well as against secondary contamination.

When a dressing is strapped to the vaccination site, however, the bands become tight when swelling occurs and thus tend to interfere with capillary and lymphatic drainage and so to produce a local passive congestion of the area. Fixed dressings also hinder ventilation, and thus tend to retain perspiration and to keep the vaccination warm and moist. This retained moisture tends to soften the vesicle, and thus aided by the abovementioned capillary distention, to produce an exudation of serum or pus. It is believed, as a result of animal experiments, that an accumulation of broken-down material retained by the dressing at the vaccination site, wherein tetanus organisms may become buried and thus find anaërobic conditions, is the essential condition without which postvaccinal tetanus will not develop under natural conditions.

This conception satisfactorily explains the fact that the complication is so strictly confined to primary, dressing-covered "takes," provided we assume that an accumulation of necrotic exudate sufficient to furnish B. tetani with conditions essential for its toxin production occurs only in the relatively more severe primary vaccinations which are covered by dressings. The long period from vaccination to onset of symptoms in cases of postvaccination tetanus (usually about twenty-one days) also becomes intelligible in the light of this hypothesis, the probable explanation being that tetanus organisms, when introduced into the vaccination, are incapable of developing before they become embedded in a mass of necrotic exudate such as might be expected to develop under suitable conditions from the tenth to fifteenth day following vaccination.

Morbidity in Pennsylvania in July, 1929

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Aliquippa	0	1	1	0	12
Allentown	9	38	13	3	22
Altoona	4	11	3	2	14
Ambridge	0	0	0	0	4
Beaver Falls	0	0	1	0	0
Berwick	0	0	0	0	0
Bethlehem	5	7	5	0	3
Braddock	0	0	1	1	0
Bradford	0	2	1	0	1
Bristol	3	0	4	0	0
Butler	0	1	0	0	2
Canonsburg	0	0	1	1	0
Carbondale	7	0	0	0	0
Carlisle	0	0	0	0	0
Carnegie	1	2	2	1	0
Chambersburg	0	0	1	0	7
Charleroi	1	4	3	0	0
Chester	2	2	1	1	2
Coatesville	0	1	0	0	4
Columbia	0	10	0	0	0
Connellsville	0	1	0	0	0
Dickson City	0	0	0	0	0
Donora	0	0	0	4	1
Dubois	0	1	0	0	0
Dunmore	0	0	0	0	0
Duquesne	3	0	10	0	0
Easton	1	2	6	0	19
Erie	8	47	5	2	53
Farrell	0	1	2	0	2
Greensburg	0	0	0	0	0
Harrisburg	0	4	0	1	32
Hazleton	2	0	1	1	3
Homestead	2	0	4	0	0
Jeannette	0	1	2	0	0
Johnstown	4	5	2	0	35
Lancaster	1	13	0	0	33
Lebanon	2	17	0	0	4
McKeesport	1	6	4	0	0
McKees Rocks	4	14	1	0	3
Mahanoy City	0	0	0	0	0
Meadville	0	6	2	0	0
Monessen	6	0	1	0	4
Mount Carmel	0	0	0	0	0
Nanticoke	2	0	1	0	0
New Castle	2	3	1	1	7
New Kensington	0	0	0	1	0
Norristown	1	0	0	1	18
North Braddock	0	0	0	0	3
Oil City	0	8	1	0	2
Old Forge	4	0	0	1	0
Olyphant	0	0	0	0	0
Philadelphia	59	64	60	13	479
Phoenixville	0	0	0	0	5
Pittsburgh	35	90	48	6	134
Pittston	2	0	0	0	0
Plymouth	0	0	0	0	0
Pottstown	0	0	1	1	1
Pottsville	1	0	0	1	0
Punxsutawney	0	0	0	0	0
Reading	5	3	6	0	26
Scranton	9	37	7	1	5
Shamokin	5	0	1	0	3
Sharon	0	13	0	0	12
Shenandoah	17	0	0	0	0
Steelton	0	0	0	0	1
Sunbury	3	3	0	0	1
Swissvale	0	0	4	0	1
Tamaqua	1	13	0	0	1
Uniontown	0	7	0	0	11
Warren	0	24	2	0	11
Washington	0	2	0	0	5
West Chester	0	0	0	1	0
Wilkes-Barre	3	16	2	0	32
Wilkinsburg	0	1	0	0	4
Williamsport	0	34	1	0	21
York	0	1	1	0	1
Total Urban	215	516	213	44	1,044
Total Rural	173	802	231	95	1,009
Total State	388	1,318	444	139	2,053

HOSPITAL ACTIVITIES

Visitors: Smoking

Without doubt, hospitals should afford as much leeway as possible in regard to hours for visitors. It is the general rule that private-room patients are permitted visitors daily from 9 or 10 a. m. until 9 p. m. Semiprivate patients in some hospitals have the same ruling. In many, they are restricted to certain hours each afternoon, with at times one or two evenings during the week. Public-ward patients in some hospitals are permitted daily afternoon visitors for a two-hour period, and in addition one or two evenings a week. In many hospitals the ward visitors are more restricted. Many hospitals that are what might be called restricted in their visiting hours for semiprivate and public-ward patients could be more liberal. Our plea is for as great a latitude as possible for visitors.

When the attending physician is making arrangements with the patient for admission, and the patient deems it wise and expedient to accept public-ward service, the physician will call attention to the restricted hours of visitors in the public wards. A percentage of patients, where another or other hospitals are in the same community, will question as to privileges in the other institutions, and may prefer the one that is the most liberal in this respect. There may be reasons why their physician must centralize his work in one institution, and they will accept the inevitable. Again, the patients, in order to have more opportunity for visitors, may decide to strain a point and take semiprivate accommodations. Then they are told they will be required in addition to pay the attending physician or surgeon. A percentage of these patients will evade the hospital charges, or make part payment, and when the physician or surgeon renders his account it may be ignored, and when further attempt is made to collect, he is told by the patient that it took all his money to pay the hospital. An additional debt was assumed, merely to be permitted more opportunity to have visitors. So we say hospitals should afford as much leeway as possible in hours for visitors, more especially to semiprivate patients and those in the public wards.

Visitors in the public wards are limited, as a rule, to two at one time per patient, for obvious reasons. The number of visitors to semiprivate and private patients at a time, as a rule, are not limited. Here is a situation where common sense should prevail. If the relatives and friends do not show proper consideration, the floor nurses should be instructed and empowered to reg-

ulate the number of visitors, based upon a ruling by the executive in charge of these matters. It is not an unusual occurrence to pass a private room of ordinary size and see a dozen or more visitors, sitting on chairs, all over the bed, on window sills, and radiators, and the less fortunate standing up. It is unnecessary to mention the several objections to this situation. This experience should not be tolerated in any hospital, as it is manifestly unfair to the patient; yet it happens daily, more so on Sundays and holidays, and no one seems to take cognizance of it. Excess of visitors in rooms devoted to semiprivate patients is unfair, for the same reasons as with private patients, and in addition because of the annoyance to other patients in the same room, more especially patients who may be very ill, recently operated upon, etc.

We urge liberal periods for visitation to patients in a hospital, but an observance of common sense in the number of visitors at any one time.

The question of visitors cannot be discussed without at the same time including the problem of smoking. As a rule, public-ward patients are not permitted to smoke in the wards. Semiprivate and private patients enjoy smoking privileges in their rooms, whether confined to bed or not. The patient, man or woman, may or may not smoke. Many of the visitors smoke. It is of interest to note at times the amount of tobacco smoke that has accumulated in a room. What is the effect on the patient? Think of the vitiated atmosphere from excess visitors plus excess smoking. Occasionally a patient will complain of fatigue or headache. How many do not complain? They simply accept the situation, but do not hesitate to state how glad they were to get home, where these annoyances could be regulated.

The following instance is of more or less frequent occurrence. A general hospital with a maternity service permits the same privileges to private and semiprivate patients, as to visitors and smoking. A woman was in a two-bed, semiprivate room. For three days the other bed remained unoccupied. Each time the husband called, he smoked, notwithstanding the wife protested that she found it objectionable. On the morning of the fourth day, a patient upon whom a cesarean section had been done, was placed in the unoccupied bed. When the husband of the first patient called that morning, he walked into the room with a lighted cigar. His wife explained to him the kind of an operation the other patient had had performed, and further stated that she was not out of the anesthetic. "All the better," he replied. "At least she cannot find fault with my smoking." It appears that the second patient does not smoke, nor does her husband, nor does either find smoking objectionable; but for the first few days after the cesarean, she did consider that the smoking in the room nauseated her. She made no complaint, not wishing to interfere with the privileges accorded the other patient. Very considerate of her, to say the least! Many similar instances could be cited, and many of them could have been sensed by an observing floor nurse, and diplomatically adjusted.

Floor nurses should be more observant as to visitors and smoking in the patients' rooms.

State Rating of Hospital Patients.—Following the International Hospital Congress at Atlantic City, the Pennsylvania Department of Welfare received numerous requests from delegates for more information about the Pennsylvania system of rating patients as free, part-pay, or full-pay. The plan followed in State-aided hospitals here is an attempt to meet the common complaint that while the rich and the poor receive excellent hospital treatment, the middle class is often at a disadvantage. The Commonwealth rates patients on the basis of data obtained by a tactful social worker who interviews them on matters of income. Her success depends on the delicate handling of these subjects without giving offense, and her recommendations are made as a result of the information.

Hospital Council Organization Begun.—With a view toward remedying all such defects as may exist in Philadelphia's hospital and public-health facilities, a first step was taken August 24 in the direction of organization of a Philadelphia Hospital Council. Philip H. Gadsden, president of the Chamber of Commerce, issued a statement asking that all hospitals appoint representatives to serve on the council. The purpose of the council is to make effective the recommendations of Dr. Haven Emerson, who recently completed a survey of Philadelphia hospitals and the public-health situation for the Chamber. The Council is to consist of the superintendent and one member of the board of directors of each hospital, together with five additional members appointed by the president of the Chamber of Commerce to represent the public generally. When organized, the Council will elect from among its members, in addition to a chairman, secretary, and treasurer, an executive committee of fifteen, composed as follows: five superintendents of hospitals, five members from the boards of directors or trustees of the hospitals, and five representing the community at large and not connected with any hospital.

Formulate Code of Ethics for Hospital Workers.—The first step toward the formulation of a definite code of ethics for the hospital field was taken by the American Protestant Hospital Association at its meeting at Atlantic City when Luther G. Reynolds, superintendent of the Seattle General Hospital, the incoming president, announced in his inaugural address that the formulation of such a code would be the major activity of the Association for the coming year.

Mr. Reynolds pointed out that many industries have already adopted ethical codes, and asserted that the hospital field has great need for a definite formulation of ethical relationships to guide it in dealings with patients, professional staff, commercial institutions, and other hospitals. He suggested a number of points which might be incorporated in such a code, and urged the coöperation of all, so that the code, when completed, might be acceptable to all hospitals, and might, perhaps, even be made a requirement for recognition by the American College of Surgeons and the American Medical Association.

A committee composed of E. S. Gilmore, Wesley Memorial Hospital, Chicago, chairman; Dr. M. T. MacEachern, American College of Surgeons; and Asa S. Bacon, Presbyterian Hospital, Chicago, was appointed to start work on the formulation of the code.—*Hospital Management.*

Bergen Pines Wins A. H. A. Award for Hospital Day Celebration.—Bergen County Hospital, Bergen Pines, Ridgewood, N. J., of which Dr. Joseph R. Morrow is superintendent, was presented with the honor award for the best celebration of 1929 National Hospital Day by unanimous vote of the American Hospital Association committee on awards at the Atlantic City meeting. First honorable mention went to Richmond Memorial Hospital, Prince's Bay, N. Y.; second honorable mention to King's Daughters' Hospital, Greenville, Miss.; and third honorable mention to Jewish Hospital, St. Louis. The award was presented

by John H. Olsen, acting chairman of the committee, at the annual banquet of the Association. The prize-winning celebration at Bergen Pines brought over 10,000 visitors to the hospital, and practically every health, welfare, and civic agency in the entire county participated in the program. So impressive and far-reaching was the celebration that four news-reel companies had cameramen present to record the events of the day.

The report of the committee of awards said, in part: "We wish to emphasize the tremendous strides and the international growth of the National Hospital Day movement. We also wish to recommend to the incoming committee that a definite set of rules be drafted for the guidance of hospitals entering the competition. The committee regrets it was necessary to eliminate one hospital that solicited funds during that day. This is contrary to the purposes of National Hospital Day."

The National Hospital Day booth in the convention hall was one of the most popular of the educational exhibits, many of the visitors stopping to look over the detailed accounts of the various celebrations which were submitted to the committee on awards, as well as much other material gathered from all parts of the country.—*Hospital Management.*

INDUSTRIAL MEDICINE

Stimulating and Maintaining Interest in Plant Safety Work.—It is without a doubt one of the important duties of the safety department of any organization to formulate plans for stimulating and maintaining interest in safety work. H. G. Hensel, Safety Director, Youngstown (Ohio) Sheet and Tube Co., says: "A plan we have is one of devising a system of carrying on a year-around program for accident prevention and some of the things that we do to stimulate and maintain interest are no doubt similar to plans carried on elsewhere, but I will mention them here for the benefit of those who are interested in making changes in their system or in starting a more active campaign for their plant.

"We have devised a system of meetings of the men held by the foremen. Each foreman must hold a meeting of his men at least twice a month, and many of them hold these meetings every week. The meetings are from fifteen to twenty-five minutes in length, and are all conducted on the company's time at a time of day most suitable to the operation of the department. At these meetings the foreman talks to the men on safety and has for his guidance a weekly bulletin issued by the safety departments and also literature taken from various safety publications which have been forwarded to him by the safety department. We urge our foremen, however, to talk to the men about hazards and unsafe practices of the department in which the men work, and we urge them to stress the fact that the unsafe practices are causing most of our accidents, and that he (the foreman) is demanding that these practices be stopped and that discipline will be used unless they are stopped."

The men are allowed to make suggestions at the meetings, and the foreman includes these suggestions, if he thinks they are practical, in the minutes of the meeting. These minutes are forwarded to the department head and to the safety department. The foremen select a man from the ranks and give him one week's notice in which to prepare a talk on safety to be given at the next meeting. This has had a very good effect, and, while most of these men read a paper, it is evident from the material included in the talk that each man who has prepared a paper has given the subject considerable thought.

Bulletin boards around the plant, on which are posted National Safety Council posters as well as home-made bulletins, create a certain amount of interest and depict to the men, by photograph, how accidents have occurred elsewhere and how they could have been avoided. For the foremen, as previously stated, the safety department issues a weekly bulletin in which much information is given them on the subject of accident prevention, and a few cases in which discipline has been handed out are always listed to show them that it is one of the effective ways of bringing about respect for foremen's orders in regard to safety. A weekly bulletin is issued giving a record of the number of all accidents, whether they have been lost-time or not, and if they are lost-time accidents, they are briefly described on this bulletin.

Foremen must issue a written report daily, on a form provided, on any unsafe practice they have corrected during the past twenty-four hours. This form is sent to the department superintendent and forwarded to the safety department, and a record is kept of these reports on a 6 x 8 card. This card also contains a record of the number of unsafe practices a foreman has corrected by months, as well as the record of the safety meetings he has held of his men and the attendance at the meetings. It also shows the number of lost-time accidents that occurred to men under his supervision, the number of days lost, and the cost of these accidents. Each side of this card is one year's record. It is on a visible card system. In case of a serious accident, the foreman's record can be placed before the department head or the works manager, and the foreman is on record as to what he has done in the past to prevent accidents, and the record will also show how well he has been succeeding. At the various works the management places the responsibility for the prevention of accidents directly upon the department heads, and they, in turn, must demand that their foremen be responsible to them.—*Hospital Management.*

TWELVE POINTS IN U. S. P. POLICY

In the *American Journal of Pharmacy* for August, 1929, E. Fullerton Cooke, chairman of the Committee on Revision of the United States Pharmacopœia, enumerates and explains the twelve cardinal points in pharmacopeial policy. For a clearer understanding of their character, a better opportunity to study them, and for their possible betterment, the chairman of the present committee is endeavoring to correlate the more important policies and explain their purpose and operation. While many other points might be brought under discussion in each division of the book, the following general considerations, basic in their application, have been selected for this study:

(1) Each new Pharmacopœia should represent the best medical and pharmaceutical knowledge of its day.

The chairman was recently asked whether he advocates a small Pharmacopœia, and his reply then and today is that he is not concerned over the size of the Pharmacopœia, but only that it shall represent fully and completely and accurately the best medical and pharmaceutical knowledge of this our scientific and progressive age. Let it be large if we have the knowledge to justify it.

(2) The first requisite as a guide to U. S. P. admission is "therapeutic usefulness or pharmaceutical necessity."

These were the words adopted by the 1920 convention in determining the scope of the Tenth Revision. The committees are bound by this program in which therapeutic value and not use is clearly set forth as the deciding factor for admission, but the valuable drug must be sufficiently used to justify recognition.

(3) The Committee of Revision directed that physicians shall decide therapeutic usefulness and pharmacists shall decide pharmaceutical necessity.

The Pharmacopœia was founded by physicians and was under their exclusive control up to 1850. In 1850 the physicians invited pharmacists to coöperate because of splendid pharmaceutical help given voluntarily by pharmacists during the 1840 revision.

In July, 1920, the following resolutions were adopted: "In questions concerning the inclusion of substances of therapeutic usefulness in the Pharmacopœia the entire body of physicians on the Committee of Revision shall have the deciding vote. In all questions regarding the inclusion of substances of pharmaceutical necessity the entire body of pharmacists on the Committee of Revision have the deciding vote."

Here was again a clear mandate to the chairman which he was called upon to administer. It is a remarkable fact that in a nationwide campaign the chairman is charged with the responsibility for this policy with which he is in sympathy, but which he never proposed, never even discussed before the Committee, and which was approved by the General Committee by an overwhelming majority and placed in his hands to administer.

(4) U. S. P. standards of quality insure maximum of efficiency and minimum cost.

When the U. S. P. became the official standard under the Food and Drugs Act of 1906, it became necessary to fix exact degrees of purity for its drugs, chemicals, and preparations, where these could be provided. This policy keeps up the quality of the medicines of the Pharmacopœia without making their cost needlessly high.

(5) The Revision Committee is made up of experts in all related fields.

In U. S. P., 1920 convention, when nominations were being made for members of the Committee of Revision, the question was asked, "What policy is to govern the convention in the selecting of such members?" and it was clearly understood that the individual's personal qualifications for work on the committee were to be the basis of selection and not geographic location or other such irrelevant reasons. Such a policy will always insure a creditable and up-to-date Pharmacopœia for the United States.

(6) Chiefly volunteer work on the Committee of Revision.

This policy has always prevailed, for there is no financial reward for the members except a modest salary for the chairman, a small honorarium for each member of Committee at the close of the revision, and necessary clerical expenses.

Small amounts have been allowed several of the subcommittee chairmen for laboratory assistants on certain experiments, but the policy of volunteer work is well established.

(7) Opportunity is always given every member to discuss every question and see the other members' opinions before a vote is called.

This has been a fixed policy of revision and has proved very satisfactory. When a question is placed before the committee, all members are invited to discuss it. Ample time is given for a reply (never less than two weeks and often four weeks) before the discussion is copied in full in the official circulars, and a vote called.

Again two weeks is allowed for the return of the vote, when the names of each and how they vote is published to the entire committee. The chairman has never heard a complaint from the working of this policy.

(8) Maximum of general publicity concerning all decisions before printing the U. S. P.

In the U. S. P. IX and again in the U. S. P. X the policy was followed of publishing in the pharmaceutical press an announcement of all important changes proposed for the new Pharmacopœia by the Committee of Revision and inviting comments or criticisms from any one who was interested. This policy also applied to all proposed deletions and new admissions.

In the U. S. P. X, when the book had reached page proof this was sent for reading and criticism to about 200 selected experts in every field of the revision. This policy increased the general interest in the revision, assisted the committee in correcting possible errors, and insured a much more acceptable Pharmacopœia.

(9) Harmonious coöperation was a notable feature of the U. S. P. X revision.

Each group of experts worked in their special field throughout the revision. All members discussed and gracefully accepted the majority decision, on all general questions. Over two hundred additional experts were elected as auxiliary members of subcommittees, and received all subcommittee bulletins and the privilege of discussion, but without vote.

(10) A convention and committee of technical experts.

Technical experts in therapeutics, pharmacy, chemistry, pharmacology, botany, pharmacognosy, serology, nomenclature, and other related sciences, here gather on a common plane for an unselfish undertaking in the interest of public health. It is not duplicated by any other country in the world.

(11) A new convention and a new Pharmacopœia every ten years.

We owe this policy to the wisdom and foresight of Dr. Lyman Spalding, who suggested and established it at the first convention in 1820. It has just been adopted as the policy for Great Britain, although they propose to adopt the fifth year of each decade for the start of a new revision. This period had proved satisfactory to most users of the book, as it gives ample time for adjustment between revisions, does not upset standards too frequently, and provides ample time to develop and try new remedies and new technical methods.

(12) A policy of independent research.

The Pharmacopœia Committee has, from time to time, undertaken independent studies of some of its problems by financing researches in private or other laboratories, but until recently this has been intermittent and no fixed policy. In the current revision the chairman and the executive committee, under the authority of the by-laws of the Convention, have adopted a definite policy for research, and eight or ten such studies are under way, through the modest grants established by the board of trustees. As was recently announced, the board of trustees also recommends to the next convention the setting aside as a memorial to Chairman Remington of an initial amount of twenty thousand dollars, the income of which is to be available for research on Pharmacopœial problems.

Tuberculosis Abstracts

A Review for Physicians

PREPARED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Published through the coöperation of the Pennsylvania Tuberculosis Society and the Medical Society of the State of Pennsylvania

Paul Ehrlich (1854-1915). Pioneer in Serology.

FOR years, search has been made for some blood-serum test that might indicate specifically the presence of tuberculous infection and that would vary consistently with different clinical or pathologic stages of that infection. No reaction is yet known that satisfies both of these conditions. However, the tuberculo-complement-fixation test, after several years of uncertain status, has at last been so technically perfected and standardized that it has a very distinct value. Dr. James Wynn of the Indiana University Medical School describes this and other serologic tests for tuberculosis. While a detailed knowledge of serologic technic is not necessary, an understanding of the principles underlying this test is essential for the clinician who would interpret it judiciously.

Tuberculo-Complement Fixation

In tuberculous infection, the bacillary focus, acting antigenically through blood-stream absorption, tends to stimulate the patient's serum to the production of a thermostabile substance commonly referred to as reagin or amboceptor. This substance is highly specific for the antigen. In the presence of complement (a thermolabile substance present in any fresh blood serum, whether normal or immune), this reagin will combine with both antigen and complement. If a tuberculous suspect's serum is mixed, in the presence of complement, with an antigen specially prepared from boiled tubercle bacilli, the disappearance of complement from the mixture connotes antigen-reagin-complement union—which means that the suspected serum contained the tuberculosis reagin; *i.e.*, was positive. (This disappearance of complement is demonstrated, as in the Wassermann reaction, by mixture with a hemolytic system in which suspended erythrocytes are the antigen and serum hemolysin the reagin; if there is no hemolysis, it is clear that complement has been previously "fixed" by the tuberculosis reagin and the reaction is positive.) A quantitative technic and accurate titration of antigen make it possible to embody the foregoing immunologic principles in a diagnostic test. It is necessary to parallel the test with the Wassermann reaction, since a positive tuberculo-complement fixation is of little significance in the presence of a positive Wassermann reaction.

Though in its earlier years tuberculo-complement fixation appeared to be of doubtful value, when skilfully performed the test now gives, within reasonable limits, distinctly reliable information. This demonstration of the test's true worth is due almost entirely to the work of such men as Petroff and Woolley in standardizing technic, antigen, etc.

According to Woolley, "With accurate technic, the reaction is positive in 60 to 80 per cent of cases, depending on the stage of the disease." Blood-stream absorption from the tuberculous focus is necessary to produce reagin production. And there must be sufficient absorption to stimulate an excess of reagin over the amount necessary to fix the lesion-produced antigen. (It is the failure of this excess which accounts for the low reagin curve in terminal stages of the disease.) It is apparent, therefore, that a positive reaction is of far from trivial significance and may be taken to mean activity in the sense that the focus is producing very definite systemic absorption. The fact that this absorption may be quantitatively insufficient to occasion symptoms or physical signs in a measure invalidates the test as an index to the extent of clinical activity. Nevertheless, a strongly positive and persistent reaction is very suggestive evidence of impending if not actually existent clinical activity.

On the other hand, in a patient with definite symptoms and physical signs pointing to active tuberculous disease, a negative reaction by no means excludes tuberculosis; for, as previously

stated, the reaction measures merely the *excess* of blood reagin (which is occasionally nil, *e.g.*, in overwhelming or terminal infections). The real usefulness of the negative reaction is in differentiating tuberculosis from such conditions as bronchiectasis, certain forms of chronic bronchitis, and interstitial pneumonia.

Cell-Sedimentation Test

Several other recently proposed serologic tests for tuberculosis may be briefly mentioned. A definite relationship has long been recognized between certain physiologic and pathologic states and the rate at which the cells in citrated blood settle on standing. Westergren (1921) observed what he believed to be a diagnostic type of sedimentation in pulmonary tuberculosis. The test requires so little apparatus and technical skill that it can be performed by any careful physician. Of the various technics in general use, many of the best features are incorporated in the method of Cutler (1929) which is as follows:

After drawing 0.1 c.c. of freshly prepared sterile 3 per cent sodium-citrate solution through a 20-gauge needle into a dry, sterile 2 c.c. syringe, a vein is entered and blood drawn to the 1 c.c. mark. The syringe is then tilted gently back and forth to avoid clotting, and the mixture promptly injected into a Cutler tube. (These tubes have an internal diameter of 5 mm. and are marked in millimeters, beginning with zero at the 1 c.c. level, increasing downward to 50.) The tube is tightly stoppered until ready for reading. Its contents are then thoroughly mixed and the level of the settling cells noted every five minutes for one hour. These data are graphed (with the time in minutes and the level in millimeters). Cutler has described fairly characteristic curves for normality, pulmonary quiescence, slight to moderate activity, and moderate to marked activity—the cell levels at 60 minutes for these groups being respectively 3, 15, 20, and 30 mm. Comparison of a patient's graphs from week to week is of distinct value in clinical management and prognosis. But the test is of little or no differential diagnostic value.

Test for Antibodies in Urine

Assuming that in active tuberculosis antibodies would be eliminated in the urine, Wildbolz (1919) suggested that the urine of tuberculosis suspects might be tested for these by injecting concentrates of it into a known tuberculin-hypersensitive skin and comparing the cutaneous response with that occasioned by tuberculin controls. Lanz (1920) and Imhof (1920) applied fundamentally the same hypothesis to the development of a serum test. Numerous efforts to confirm these observations have led to an accumulation of statistical data that have thus far proved inconclusive.

Flocculation Test

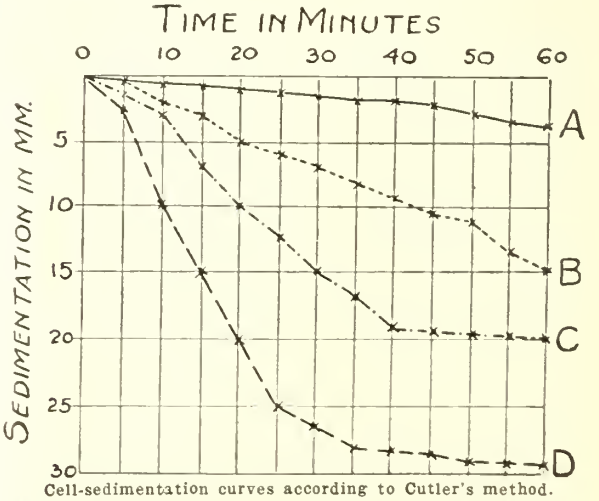
The flocculation test of Daranyi (1922) is dependent on the fact that a substance (probably globulin) may be precipitated from a high percentage of tuberculous sera by an alcohol-salt-solution mixture. Convincing evidence of its real diagnostic usefulness is lacking. Though positive in a very large number of advanced active cases, its value in picking up the early case of tuberculosis is practically nil.

Precipitin Test

Agglutinin and precipitin reactions in tuberculosis have been very largely abandoned, since a general lack of specificity has militated against any possible clinical application. However, Doan, working with a tubercle-bacillus fraction furnished him by Anderson, has described very recently (May, 1929) a precipitin test which is promising. Though still entirely in the experimental stage, the test is of more than ordinary interest; for, if critical study eventually proves its value, its simplicity of technic might conceivably bring it into very general clinical use.

Comment

From the foregoing, it is obvious that today, at least, serologic methods are of comparatively minor importance in the diagnosis of tuberculosis. Even tuberculo-complement fixation merely furnishes confirmatory evidence for a diagnosis already made by the less technical but more fundamentally important means, such as the study of clinical history, physical signs, and sputum. In the words of Dr. Krause, "The laboratory diagnosis of the ordinary case of tuberculosis can be accomplished by simple methods in an ordinary physician's hands in an ordinary physician's office."



Cell-sedimentation curves according to Cutler's method.
A. Normal.
B. Pulmonary quiescence.
C. Slight to moderate activity.
D. Moderate to marked activity.

THE MEDICAL SOCIETY
OF THE
STATE OF PENNSYLVANIA

Officers' Department

WALTER F. DONALDSON, M.D.
Secretary
8063 Jenkins Arcade Bldg.,
Pittsburgh, Pa.

TWENTY-FOURTH ANNUAL CONFERENCE OF SECRETARIES

The twenty-fourth Annual Conference of County Society Secretaries, to which the editors of county society publications, who are not also secretaries, will be invited, will be held in Harrisburg, Tuesday afternoon, December 3d.

The program this year will include a "Question Box," to which it is hoped many questions will be addressed long in advance of the Conference by secretaries and others who are puzzled regarding any phase of relationship between members of county societies and their State Society.

The Conference will, of course, be attended by most of the officers, including the trustees of the State Society, and will be preceded by a luncheon. We hope that last year's attendance, 55, will be exceeded this year.

CONTRIBUTIONS TO MEDICAL BENEVOLENCE FUND

The following contributions to our Benevolence Fund are herewith gratefully acknowledged by the Committee on Medical Benevolence:

Woman's Auxiliary to Clinton County Medical Society	$5.00
Woman's Auxiliary to Dauphin County Medical Society	300.00
Woman's Auxiliary to Lycoming County Medical Society	100.00
Woman's Auxiliary to Lackawanna County Medical Society	182.00

"A FRIEND"

A member of the Allegheny County Medical Society has recently added to his monthly list of contributions a gift of $5.00 to the Benevolence Fund of the Medical Society of the State of Pennsylvania. This month we are acknowledging his sixth contribution significantly designated as from "A Friend."

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to September 14:

BEDFORD: *New Member*—William H. Brennen, Osterburg.

BUCKS: *Death*—Richard H. G. Osborne, San Francisco (Univ. of Pa. '66), June 8, aged 86.

CARBON: *Death*—J. Harrington Young, Lansford (Univ. of Pa. '01), July 11, aged 53.

CHESTER: *New Members*—George O. Chalfant, John L. Johnston, West Chester; Arthur Carmichaels, Coatesville. *Death*—Wilbur F. Cassell, Spring City (Balt. Univ. School of Med. '03), August 27, aged 51.

CLINTON: *New Member*—Raymond A. Werts, Renovo.

DELAWARE: *Death*—Ernest L. Clark, Media (Hahnemann Med. Coll. '93), August 18, aged 66.

INDIANA: *Death*—John S. Miller, Clymer (Coll. P. & S., Balt., '90), July 14, aged 66.

LANCASTER: *New Members*—Anna Place Klemmer, Harry C. Fulton, Lancaster.

LEHIGH: *Death*—Bertram A. Beale, Allentown (Univ. of Pgh. '03), August 16, aged 46.

LUZERNE: *New Member*—Lachlan McA. Cattanach, 96 S. Franklin St., Wilkes-Barre. *Reinstated Member*—George J. Silewski, 203 Prospect St., Nanticoke. *Death*—Louise M. Stoeckel, Trucksville (Woman's Med. Coll., Phila., '90), January 14, aged 81.

LYCOMING: *Death*—Daniel E. Kiess, Hughesville (Maryland Med. Coll. '86), August 30, aged 65.

MIFFLIN: *New Member*—J. M. Fleming, Lewistown.

MONTOUR: *Death*—Hugh B. Meredith, Philadelphia (Univ. of Pa. '77), August 1, aged 76.

NORTHAMPTON: *Death*—Robley D. Walters, Easton (Jeff. Med. Coll. '84), August 5, aged 74.

PHILADELPHIA: *New Member*—David Promin, 3424 Cottman St., Philadelphia. *Reinstated Members*—Onie Ann Barrett's, Barrett's Forest Farms, Wakeman, Ohio; Francis S. Chambers, 1814 Pine St., John Eiman, Presbyterian Hospital, Arthur F. Keegan, 1729 Pine St., William Francis Monaghan, 901 N. 44th St., Justus Sinexon, 4010 Chestnut St. *Death*—Edward J. Donnelly, Philadelphia (Med. Chi. Coll., Phila., '98), July 31, aged 57.

Schuylkill: *Reinstated Member*—Benjamin F. Lizio, 35 Federal St., Beverly, Mass.

Venango: *Death*—James B. Siggins, Oil City (Univ. of Mich. '83), recently, aged 72.

Westmoreland: *Death*—Charles J. Skelley, Irwin (Jeff. Med. Coll. '89), August 29, aged 70.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since August 1. Figures in first column indicate county society numbers; second column, State Society numbers:

Sept.	3	Bedford	15	7757	$7.50
		Schuylkill	166	7758	7.50
		Chester	79-81	7759-7761	22.50
		Philadelphia	2101-2107	7762-7768	48.75
	6	Lancaster	146-147	7769-7770	15.00
	9	Mifflin	24	7771	7.50
	13	Luzerne	298-300	7772-7774	18.75
		Clinton	23	7775	3.75

County Society Reports

DELAWARE—SEPTEMBER

A combined meeting of the Delaware County Medical Society and the Eastern Delaware County Medical Club, held at the Chester Hospital on September 12th, was addressed by Dr. Clarence L. Hyde, of Springfield Lake Sanatorium, East Akron, Ohio. His subject was "The Modern Treatment of Tuberculosis."

Speaking on the childhood type of tuberculosis, the speaker stressed the importance of a careful history, physical examination, and x-ray study, following up year after year to detect tuberculosis in the adult. He emphasized the point that one should not be led astray by not using the x-ray. He illustrated with lantern slides the lymphatic drainage of the chest and types of hilum tuberculosis, stating that where there is an involved node in the hilum, there must be a lesion in the lung. He showed the modes in which these hilum infections spread: (1) a method called the simple spread, (2) pleural spread, and (3) the parenchymatous spread. Under treatment, he stated that in the massive form one must carefully consider pneumothorax or phrenectomy. He also enumerated why a patient suffering with the parenchymatous type of tuberculosis could not be properly treated in a ward of a general hospital, naming the following reasons: (1) food difficulties, (2) the wards are usually closed from light, and (3) the rest could not be enforced under discipline. Summing up these disadvantages, he then named the advantages of the sanatorium—rest, balanced diet, and an outdoor life.

Dr. Hyde also warned surgeons not to operate on patients who show any signs of tuberculous activity and not to induce abortion in all cases of pregnancy. Corneal ulcers have improved with a balanced diet, rest, and outdoor life. He also stated that a gain in physical development or the addition of fat is not an indication of healing or that the patient is improving. He pleaded for more diagnostic facilities and a place where these patients can get adequate treatment.

Dr. M. A. Neufeld then made a motion that our county society endorse the movement for the establishment of a tuberculosis hospital in Delaware County, which passed unanimously.

Dr. A. M. Sharpe asked the speaker how x-ray study helps in the differentiation, as to which type of case should be treated by diaphragmatic rest and which by air injection?

Dr. F. E. Kraker asked what feeding is used in the sanatorium?

Dr. J. W. Wood asked how he gives the bone, gland, and peritoneal cases of tuberculosis enough sunlight without predisposing these patients to pulmonary hemorrhage?

To the above questions the speaker answered: The first thing to do when the patient comes from the clinic is to determine whether pneumothorax should be induced, and x-ray studies show what can be done, thereby saving a good deal of time. The patient's general condition is also a factor which has a bearing. The chief value of the x-ray is in the bronchiectatic cases.

A general diet is used for the average person, with an increase in protein material in the form of meats. In the enteric cases the food is ground, and the quantity is estimated according to the caloric value. In cases in which rheumatic fever is a complication, the Pemberton diet is used. In infants, the diet is adjusted according to the calories required.

The speaker warned that one must be very careful regarding light. Usually the sanatoria have one doctor who makes a study of the pulmonary cases as regards their activity, because light softens tuberculous areas in the chest, and then the desired fibrosis fails to develop. The thing to do is to permit the lesion to reach the first stage of fibrosis, then give the light treatment gradually, having the lesion covered at first and gradually uncovering it, watching the reaction of the patient.

County Commissioner M. H. Birney, who was present at the meeting, stated that the commissioners of Delaware County hope to start constructing a Delaware County Tuberculosis Hospital some time next spring.

Albin R. Rozploch, M.D., *Reporter.*

FIFTH COUNCILOR DISTRICT—AUGUST

The twenty-third annual meeting of the West Section of the Fifth Councilor District of Pennsylvania was held at the Carlisle Country Club, Carlisle, August 15th. The meeting was called to order by Dr. Lawton M. Hartman, of York, in the absence of the president, Dr. C. R. Rickenbaugh, of Carlisle.

The president's address, a very interesting paper entitled "The History of Early Medicine," was read by Dr. Hartman.

Next year's meeting will be held in Franklin County on the third Thursday in July instead of August.

The following officers were elected for the coming year: president, Dr. F. G. Wright, Chambersburg; first vice-president, Dr. P. A. Noll, York; second vice-president, Dr. J. McCrae Dickson, Gettysburg; third vice-president, Dr. W. J. Phillipy, Carlisle; councilor, Dr. L. S. Weaver, York; secretary, Dr. W. Newton Long, York; and treasurer, Dr. Gibson Smith, York.

The speaker of the day was Dr. John H. Stokes, professor of dermatology and syphilology at the University of Pennsylvania. His paper was entitled "Critical Treatment Problems in Today's Syphilology."

Dr. Stokes addressed the meeting on certain critical problems in today's syphilology. He first drew attention to the fact that the significant advances in the suppression of syphilis are being accomplished by those nations in which the treatment of the disease has passed into the hands of the State. Reductions ranging from a third to four fifths in the incidence of primary infections with syphilis have been reported from such countries as Germany, Great Britain, and Belgium. This country, in which the treatment of the disease is in the hands of the practitioner, is seeing the organizational possibilities of venereal-disease control exploited

by big business rather than by organized medicine or the public-health services. Reductions in the incidence of the disease comparable to those demonstrated for European countries have not yet been proved for the United States.

The treatment of syphilis with bismuth was discussed and emphasis placed on the fact that bismuth has probably surpassed mercury in the eligibility of the preparations available for treatment purposes. It cannot be said, however, that the drug is as yet fully evaluated. Under no circumstances should it be used as a substitute for the arsphenamins.

In discussing the prevention and control of cardiovascular and neurosyphilis, emphasis was laid on the importance of preparing all patients with late syphilis with mercury or bismuth before using the arsphenamins. The use of arsphenamin in late cardiovascular syphilis was deprecated. In neurosyphilis malarial therapy is still on trial and may be surpassed by other simpler and less severe forms of treatment. In discussing the difficulties of the practitioner in the treatment of syphilis, emphasis was laid on difficulties arising from inadequate examination of the patient, from failure to envisage a distinct aim towards which treatment is directed from the outset, and on the lack of familiarity with the Herxheimer reaction, or therapeutic shock, which is responsible for a third of the practitioner's troubles in the treatment of syphilis. It is further emphasized that therapeutic shock could be avoided by proper preparation of the case, and a technic was described. The double-edged effect of rapid healing, i. e., the therapeutic paradox in late syphilis, was discussed and the difficulties arising from lack of familiarity with the antisyphilitic medicants used and their complications. Niceties of technic were considered with emphasis on the effective treatment of early syphilis, which calls for not less than thirty to forty arsphenamin or neoarsphenamin injections and on the limited applicability of arsphenamin proper in general practice. The practicing physician was urged to give intravenous injections slowly to follow certain principles in the administration of intramuscularly injected remedies, and to take advantage of the detoxifying and irritation-reducing effects of calcium and the use of ephedrin in the prevention of arsphenamin reactions.

Brief talks were made by Dr. William T. Sharpless, president-elect of the State Medical Society, Dr. Walter F. Donaldson, secretary of the State Society, and Dr. Paul R. Correll, chairman of the Committee on Public Health Legislation.

Following adjournment of the meeting, dinner was served. Fifty members of the society and their families were present.

W. Newton Long, M.D., *Secretary.*

TRICOUNTY MEETING—AUGUST

Interest in cancer treatment and research was strikingly demonstrated on August 20th by the attendance of over 100 physicians at the tricounty medical society meeting held at Jeanes Cancer and Diagnostic Hospital, Fox Chase, Philadelphia, for the purpose of inspecting this comparatively new cancer center and of viewing a motion-picture film depicting recently developed phases of cancer research. Officers and members of the Bucks, Chester, and Montgomery County Medical Societies, including Dr. Wm. T. Sharpless, of West Chester, president-elect of the Medical Society of the State of Pennsylvania, were guests of the hospital for luncheon and the subsequent program.

Dr. Roscoe W. Teahan, Medical Director, and other members of the staff conducted the visitors through the grounds and buildings, and showed them the modern equipment of the hospital. Over $1,000,000 was spent for property and apparatus, it was said, and $2,650,000 was provided as an endowment fund by the will of Miss Anna T. Jeanes, a prominent Philadelphia Friend, who died in 1907.

Following the inspection of the hospital, the guests were shown a motion-picture film released by the American Society for the Control of Cancer, and demonstrating, in the experiment photographed, that radium irradiation destroys cancer cells, but does not affect normal living cells.

WARREN—AUGUST

The physicians of Warren County were addressed, August 19th, by Dr. Emlyn Jones, chief of the Bureau of Vital Statistics of the State Department of Health.

Dr. Jones outlined the importance of accurate statistics in arriving at any conclusions about the health of a community or country. Pennsylvania has a very complete department. This has been in existence all over the State only since 1906. The first registries of births and deaths were kept by the church. Today, at Harrisburg, there are on file for immediate reference over ten million certificates, and the Department of Vital Statistics has an annual appropriation of $125,000. Some ninety employees in the central office and seven hundred assistants throughout the State are paid about $100,000 to collect the records. Over 80,000 requests for copies of records were attended to last year. Dr. Jones gave a summary of the various needs for such information, as proof of age, of death, and of citizenship. A table was shown giving the number of births, deaths, and marriages for the county, also the chief causes of death and some of the contagious diseases prevalent. Warren County, in 1928, had a death rate of twelve per thousand, which is about the same as the rate for the State in general. The birth rate was nineteen per thousand, or slightly under that of the State. Warren County and Borough have had much less diphtheria and measles than the average in the State, but scarlet fever and whooping cough were more prevalent. The infant death rate in the county was forty-nine per thousand births as compared with seventy-two in the State.

The talk was very well received, and as physicians are held accountable for correct returns of births and deaths occurring in the course of their practice, they will be more inclined to render a prompt and accurate report when the import of such records is explained.

Among the causes of death, heart disease, cancer, and brain hemorrhage (apoplexy) lead, and Dr. Jones stated that these diseases could be reduced if an active campaign would be waged against them, as has been done with tuberculosis. Automobile deaths are assuming an important place, and here, of course, much remains to be done by the individual and the State to bring about a reduction.

M. V. Ball, M.D., *Reporter.*

WAYNE-PIKE—JULY

The regular meeting of the Wayne-Pike County Medical Society was held at Fauchere Casino, Milford, on July 18, with Dr. R. G. Barckley, president, in the chair. This meeting was planned as a specially festive occasion in that not only were members of neighboring county medical societies invited to attend but the wives of all were included. Thus physicians from Scranton,

Stroudsburg, and Port Jervis, as well as from the towns comprised in the component society, were present. Dr. Frederick J. Bishop, District Councilor, spoke of recent legislative matters of interest to the profession, and announced the date and plans for the next meeting of the third district on August 1, at Irem Temple Country Club, Dallas, Pa.

The guest of honor was Dr. James Taylor Gwathmey of New York, who delivered an address on "Preliminary Medication—Colonic Anesthesia, Obstetrical Analgesia."

Dinner was served. Although the ladies had the privilege of hearing the lecture if they wished, arrangements were made for bridge at the Community House or a sight-seeing tour of the town for those to whom the lecture might not appeal. In view of the fact that the afternoon was so warm, the majority elected to play bridge.

The Woman's Auxiliary of the Medical Society of the State of Pennsylvania

MRS. E. KIRBY LAWSON, *Editor*
2533 Walnut Street, Harrisburg, Pa.

COUNTY AUXILIARY REPORTS

Allegheny.—At its organization in 1925, the Auxiliary enrolled 242 active members and 3 special active. In four years, with some losses because of resignations, the membership has reached over 300 in active, associate, and honorary.

At the opening meeting in September, 1928, Mrs. Theodore Baker, who was chosen president, gave a brief outline of the year's program, including the Medical Benevolence Fund, the Allegheny County Permanent Home Fund, and the furthering of periodic health examinations.

On October 16th, at the Hotel Schenley, the Auxiliary informally entertained the members from the Tenth District. Dr. Lawrence Litchfield, Councilor for the Tenth District, spoke briefly, introducing Dr. Paul R. Correll, who discussed at length the Chiropractic Bill and the work of the Auxiliary regarding it.

On November 26th, Dr. George J. Wright was the speaker, his subject being "Psychology of Everyday Life."

At the January meeting, Miss Grace Stoakes, chief probation officer of the Juvenile Court, was the speaker.

To establish a small loan fund for medical students at the University of Pittsburgh, a bridge party was given in the Ballroom of the William Penn Hotel on February 11, 1929. The distribution of that fund, which amounts to $738.75, is now in the hands of the Student Loan Fund Committee of the University, and it was put to work with the opening of classes in September.

On March 26th, Miss Frances Shirley spoke on "Mental Hygiene for the Crippled Child."

At the annual meeting on May 28th the following officers were elected: president, Mrs. C. A. Orr; first vice-president, Mrs. James O. Wallace; second vice-president, Mrs. James S. Hammers; recording secretary, Mrs. H. Stanley Wallace; corresponding secretary, Mrs. David B. Ludwig; treasurer, Mrs. Homer W. Grimm. Mrs. Charles B. Forcey, president of the State Auxiliary, was present at the luncheon, and expressed her appreciation of the activities of the Allegheny County women with regard to periodic health examinations. Mrs. D. N. Bulford, vice-president of the State Parent-Teacher Association, spoke on "Health Promotion Through Legislation." Mrs. J. J. Myer, of Johnstown, extended greetings from the Cambria County Auxiliary, Mrs. Thomas St. Clair, of Latrobe, from Westmoreland, and Miss Simpson, from Beaver. It was a splendid meeting, bringing to a successful close a most satisfactory year's work.

Fayette.—The annual summer outing for the poor children of the community was held on July 12th. This affair is sponsored annually by the Auxiliary for the benefit of poor children of tuberculous parents. A delightful program was arranged, consisting of a picnic at the Third Presbyterian church, Uniontown, and a moving-picture show at the State Theater. The committee in charge consisted of Mrs. R. H. Jeffrey and Mrs. W. A. McHugh, of Uniontown, and Mrs. L. Dale Johnson, of Allison.

Lancaster.—At the first fall meeting, held September 7th at the home of Mrs. George W. Stoler, eleven members were present and two new ones were accepted. The October meeting was dispensed with because of the State meeting at Erie—to which delegates were elected. Mrs. Walter Jackson Freeman will be the guest speaker at the November meeting.

Montgomery.—Following is the report on the work done in behalf of the preschool-age child as part of the nation-wide observance of May Day-Child Health Day:

Three thousand pieces of literature were sent to doctors, ministers, teachers, and others in the county to explain the purpose of Child Health Day, and five thousand cards were distributed to parents of children entering school in September. In response to this, about 250 children attended the clinics held in the Norristown grade school on specified days, with Drs. George L. Hoffman, Sarah E. Maule, Edgar S. Buyers, Joseph M. Ellenberger, Remo Fabbri, Willis Read Roberts, Francis D. Ventura, Ammon G. Kershner, and Perry W. McLaughlin in charge, assisted by the following nurses: the Misses Unstead, Landis, and Waltemate, and Mrs. Fry. Members of the Auxiliary, teachers, and mothers also helped. Mrs. Santora rendered very valuable assistance in the east end. Of the 250 children examined, 33 had perfect records. A large percentage had throat affections, and many had never been vaccinated.

On Wednesday evening, May 1st, at an open meeting in the Eisenhower Auditorium, Dr. W. G. Turnbull gave a most comprehensive talk on health. Several playlets given by pupils from the grades preceded the lecture.

The Norristown program was in charge of Mrs. Perry W. McLaughlin.

During the week, three health films—"One Scar or Many," "Fly Danger," and "Preventing Diphtheria"—were shown daily at moving-picture houses in Bridgeport and Norristown. The films were loaned by the State Health Department. This work was in charge of Mrs. Joseph E. Beideman. About eight thousand people saw each film.

Many sections of the county have well-organized health centers, and these put on extra clinics and programs through Parent-Teacher organizations. Jenkintown, Old York Road, Abington, Main Line, Center Point, Lansdale, Schwenkville, Royersford, Conshohocken, Plymouth Township, Trooper, Pottstown, Collegeville, and Greenlane did outstanding work.

The success of the work was due to the Norristown *Times Herald* and the *Norristown Press*, which presented the Auxiliary with printing worth $38.75 and much publicity; to Miss Helen Cole Carter and her

office force; to the doctors and nurses; and to the members who worked so untiringly.

Of the 250 children examined, 165 had bad teeth, 155 had tonsils more or less diseased, 36 had enlarged cervical glands, 26 were malnourished, 15 had nasal obstructions, 8 had skin diseases, and 2 had heart conditions.

Mrs. J. Newton Hunsberger, of Norristown, was chairman, and due to her efforts and diligence, Child Health Day was a marvelous success.

An executive board meeting was held August 13th in the form of a morning porch party at the home of Mrs. Hunsberger, Norristown. Interesting reports were heard from the picnic sponsored by the Auxiliary in June, at Memorial Park, Schwenkville, for the doctors and their families. It was a great success and very largely attended. Plans were made to entertain all visiting women who accompanied the doctors to the Second Councilor District Meeting at Valley Forge on September 12th.

The September meeting was held at the home of Mrs. Frank C. Parker, at which time the members decided to do real work for periodic health examinations. Mrs. George W. Miller, of Norristown, was appointed Councilor for the Second District.

Tioga.—The wives of Tioga County physicians met at the Penn-Wells Hotel, Wellsboro, on Saturday, August 3d, and, following an excellent luncheon, organized an Auxiliary to the Tioga County Medical Society, with ten charter members. Mrs. Edward Lyon, of Williamsport, District Councilor, presided at the organization, explaining the origin and purpose of the Auxiliary, and Dr. W. S. Brenholtz, also of Williamsport, Councilor of the Seventh District for the State Medical Society, gave an instructive and interesting talk.

The following officers were elected: president, Mrs. H. W. Howland, Gaines; first vice-president, Mrs. Foster H. Kennedy, Wellsboro; second vice-president, Mrs. Charles R. Smith, Tioga; recording secretary, Mrs. D. S. Brazda, Blossburg; corresponding secretary, Mrs. John H. Doane, Mansfield; treasurer, Mrs. John R. Davies, Blossburg; directors, Mrs. Farnham H. Shaw, Mrs. William F. White, and Mrs. Fay X. Field, of Wellsboro, and Mrs. Hughes G. Meaker, of Tioga. Mrs. John H. Doane, Mansfield, was elected delegate to the State meeting at Erie, with Mrs. Farnham H. Shaw as alternate.

Medical News

Deaths

Mrs. Mary B. Wilcox, wife of Dr. Frederic P. Wilcox, of Philadelphia; September 5.

Nathan H. Hornstine, M.D., of Philadelphia; Medico-Chirurgical College, 1904; aged 58; September 14.

Wilbur F. Cassel, M.D., of Spring City; Baltimore University School of Medicine, 1903; aged 51; August 27.

James A. Rogers, M.D., of Pittsburgh; University of Pittsburgh School of Medicine, 1919; aged 35; of heart disease.

Arthur C. Wolf, M.D., of Ridley Park; Medico-Chirurgical College, 1903; aged 52; September 16, after a long illness.

Henry H. Clark, M.D., of Pittsburgh; Bellevue Hospital Medical College, New York, 1868; aged 86; July 13; of pneumonia.

Mrs. Mildred H. Egerton, daughter of Dr. Harry Hudson, of Philadelphia, was instantly killed in an automobile accident, September 10, near Langhorne, Pa.

Jefferson P. Biehl, M.D., of Plymouth; Jefferson Medical College, 1883; a practitioner of medicine for forty-six years; aged 71; August 26.

Thomas Thiel, M.D., of Philadelphia; practiced medicine more than thirty-five years; aged 67; September 4, at his summer home in Cape May, N. J.

John D. Rupp, M.D., of Shoemakersville; Bellevue Hospital Medical College, New York, 1877; in practice for fifty-two years; aged 75; August 23.

Charles J. Skelly, M.D., of Irwin; Jefferson Medical College, 1889; practiced medicine for forty years; aged 70; August 29, from chronic cardiac disease.

E. Bryan Kyle, M.D., of Philadelphia; Philadelphia College of Pharmacy, 1885; Jefferson Medical College, 1893; medical director of the Home Life Insurance Company of America; aged 68; September 5.

Edward S. Dungan, M.D., of Pittsburgh; Hahnemann Medical College and Hospital, 1900; physician for the Pennsylvania Railroad at Rochester near Pittsburgh; aged 50; September 15, at the Allegheny Hospital.

I. Valentine Levi, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1900; aged 52; September 11. Dr. Levi served on the staffs of the Northwestern General and Jewish Hospitals, Eagleville Sanatorium, and the Children's Seaside Home, Atlantic City.

Mrs. Cornelia W. Brewer, 39, wife of Dr. George M. Brewer, of Plumsteadville, Bucks County, who had been in poor health for some time, committed suicide August 12, at her home, by shooting herself twice through the breast. She was District Deputy Grand Matron of the Grand Lodge, Order of the Eastern Star.

Dr. Morton Prince, 74, celebrated neurologist and nationally known medical authority, died August 31, at the Peter Bent Brigham Hospital, Boston. Dr. Prince's decorations included Order of Chevalier of St. Sava (Serbia), 1916; Order of the Rising Sun (Japan), 1918; Cross of the Legion of Honor (France), 1919; and Royal Order of Red Cross and Order of the White Eagle (Serbia), 1920.

Daniel E. Kiess, M.D., of Hughesville; Maryland Medical College, Baltimore, 1886; director of the Grange National Bank, and for a time its president; medical inspector of the schools of Hughesville and surrounding townships for many years; member of the Board of Directors of the Muncy Valley Hospital; aged 65; August 30, having been in ill health for about a year.

Bertram A. Beale, M.D., of Allentown; University of Pittsburgh School of Medicine, 1903; aged 46; August 16, at Clifton Springs, N. Y. For a number of years Dr. Beale was surgeon-in-chief of the eye, ear, nose, and throat division of the Clifton Springs Sanitarium and Clinic. In June, 1928, he established offices at Allentown, and shortly afterwards was named otolaryngologist of the Allentown Hospital. Several years ago he was elected a fellow of the American College of Surgeons. During the World War he was commissioned a captain in the Volunteer Medical Service Corps by President Wilson and appointed chief of the advisory commission of the Corps.

J. Harvey Fronfield, M.D., of Media; University of Pennsylvania School of Medicine, 1883; aged 70; September 8, at the Chester Hospital, after a long illness. Dr. Fronfield, who was a former president of the Delaware County Medical Society, was a Pennsylvania Railroad surgeon for forty years and physician to the Delaware County prison for more than forty years. He was physician to Swarthmore Preparatory

School for twenty-five years and consulting physician to the Glenn Mills School for Boys for twenty years. He was one of the chiefs of staff of the Chester Hospital and a member of the Media Board of Health since its inception. He was also district censor of the Delaware County Medical Society.

Charles Williamson Richardson, M.D., of Washington, D. C., died in Boston, August 25, aged 68, following an operation. Dr. Richardson was a member of the Board of Trustees of the American Medical Association at the time of his death, having served since 1920. He was professor emeritus of laryngology and otology in his Alma Mater, George Washington University, from which he was graduated in 1884. He had an international reputation in his specialty, and many honors in recognition thereof had been bestowed upon him. During the World War he was assigned to the office of the surgeon general as director of the section of defects of hearing and speech. The Philadelphia Medical Club will recall the lovable character of Dr. Richardson, as manifested at the time of a visitation by the Club to Washington a few years ago.

S. MacCuen Smith, M.D., of Philadelphia; Jefferson Medical College, 1884; aged 66; September 14, suddenly, of heart disease. Dr. Smith was professor of otology, Jefferson Medical College, and visiting otologist to the Jefferson, Germantown, Jewish, Memorial, and Oncological hospitals. He was a member of many local and national societies, and in 1916 was president of the American Laryngological, Rhinological, and Otological Society. Dr. Smith served as an intern at the Germantown Hospital, and in 1886 a department for the treatment of ailments of the ear, nose, and throat was established at that institution and he was asked to take charge. This stimulated his interest in a specialty in which he subsequently attained an international reputation. Dr. Smith has been an extensive contributor to the medical literature, both in medical journals and textbooks. During the World War Dr. Smith was a major in the M. R. C., and did considerable work with soldiers whose throats had been affected by poison gases.

Births

To Dr. and Mrs. Richard W. Cooney, of Erie, a son, recently.

To Dr. and Mrs. Josiah F. Reed, of Harrisburg, a son, June 17.

To Dr. and Mrs. F. J. Cunjak, of Steelton, a daughter, in July.

To Dr. and Mrs. George F. Wheeling, of Windber, a son, July 30.

To Dr. and Mrs. James J. O'Connor, of Spangler, a daughter, July 28.

To Dr. and Mrs. Arthur A. Bobb, of Williamstown, a son, during the early part of August.

To Dr. and Mrs. Harold Walton, a daughter, July 29. Dr. Walton is the son of Dr. Levi S. Walton, of Jenkintown.

Engagements

Dr. M. Edith MacBride, of Sharon, and Mr. Allen T. Dexter, of Cleveland, Ohio.

Miss Muriel Thompson, of Princeton, N. J., and Dr. John Shotwell Easton, of Pittsburgh.

Dr. Sarah E. Worob, of Reading, and Dr. A. X. Rossein, of Kew Gardens, Long Island, N. Y.

Miss Sara Mellor Pennell, daughter of Dr. and Mrs. Howard Y. Pennell, of West Chester, and Mr. Lewis W. Barton, of Marlton, N. J.

Miss Nancy Nichols Page, daughter of Dr. and Mrs. Henry F. Page, of Philadelphia, and Mr. Richard Mantle Fielding, of Germantown.

Miss Esther Cordelia Dill, daughter of Dr. and Mrs. Wallace W. Dill, of Norristown, and Mr. Clarence B. Wingert, 3d, of Philadelphia.

Miss A. Katherine Shumway, of Bryn Mawr, and Dr. Howard Malcolm Freas, a graduate of the Medical School of the University of Pennsylvania who is on the staff of the Belgian Congo Mission.

Marriages

Miss Amelia Casciato to Dr. A. M. Perri, both of Philadelphia, September 9.

Miss Elinor Lloyd to Dr. George Lorenz, both of Philadelphia, August 28.

Miss Imogene A. Harris to Dr. F. Lee Terry, both of Reading, August 10.

Mrs. Edith May Matthews, of Miami, Florida, to Dr. Fred E. Ross, of Erie, recently.

Miss Lillian Evelyn Safka, of Philadelphia, to Dr. Adolph S. Gabor, of Bethlehem, September 11.

Miss Alice Thornton, of Haverford, to Mr. Thomas R. Neilson, Jr., son of Dr. Thomas R. Neilson, of Devon, October 5.

Miss Kathryn Barton Le Van, daughter of Dr. and Mrs. George F. Le Van, of Philadelphia, to Mr. Albert Gledhill, of Elmer, N. J., September 14.

Miss Jane Zerrall Anderson, of Cincinnati, Ohio, to Mr. Samuel McClintock Hamill, Jr., son of Dr. and Mrs. Samuel McC. Hamill, of Philadelphia, September 28.

Miscellaneous

Dr. Harry M. Bunting, of Norristown, is visiting in Ireland and France.

Dr. J. Howard Seiple, of Center Square, has returned from a trip to France and England.

While rushing to aid two injured men, September 3, Dr. W. A. Murphy, of Parkesburg, was hurt in a fall down an embankment.

Dr. Thomas W. Moran, of Latrobe, recently underwent an operation at the Johns Hopkins Hospital, Baltimore, Md.

Dr. and Mrs. George B. Kunkle, of Harrisburg, visited in Europe during the summer, spending several weeks in Vienna.

Dr. and Mrs. N. W. Hershner and Dr. and Mrs. Richard R. Spahr, of Mechanicsburg, recently sailed for a three-months' trip to Europe.

Dr. and Mrs. Merl V. Hazen and Dr. and Mrs. Arthur L. Page, of Harrisburg, are touring Europe and expect to return home by December 1.

Dr. and Mrs. Jesse L. Lenker and family, of Harrisburg, spent several weeks making a trip through Nova Scotia and New Brunswick.

Dr. and Mrs. H. F. W. Flock, of Williamsport, have returned from a tour abroad. Dr. Flock took a special course in aural surgery at the clinics of Vienna.

Dr. and Mrs. John L. Atlee, Jr., of Lancaster, who have been spending the summer on their wedding trip through the West, sailed for Europe on September 21.

Dr. W. Eugene Delaney, of Williamsport, sailed August 31 for Vienna, where he will spend the next nine months taking a special course in abdominal, thyroid, and plastic surgery.

Informal ceremonies marked the laying of the corner stone for the new hospital in York. It is planned, however, to carry out an elaborate program on the occasion of its dedication.

Dr. Amelia Hess, of Philadelphia, honorary president of the Women's Southern Homeopathic Hospital,

(Continued on page xviii.)

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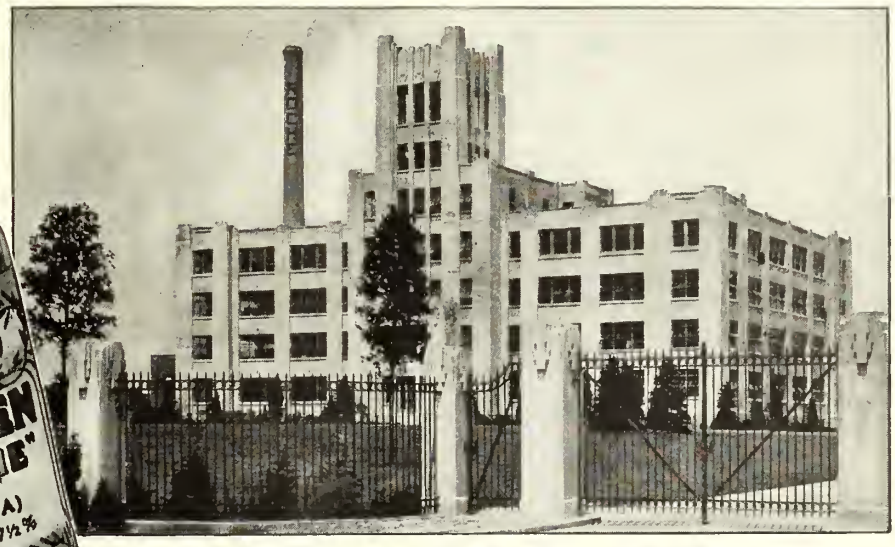

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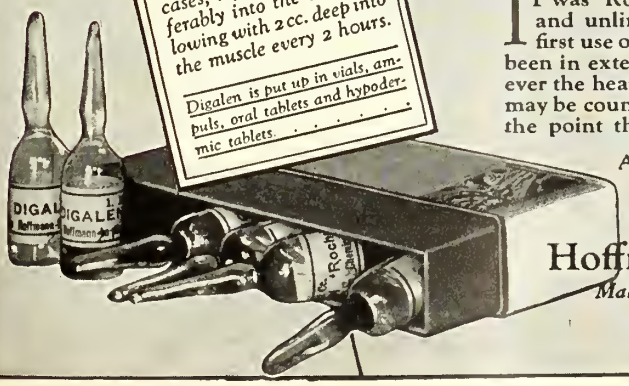

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MEDICAL NEWS

(Continued from page 46.)

and only surviving founder of that institution, was recently beaten and choked by a Negro burglar in her home.

THE PENNSYLVANIA HOMEOPATHIC MEDICAL SOCIETY convened at Hahnemann Medical College on September 24. Among the subjects discussed were undulant fever, new developments in surgery, and illnesses arising from industrial occupations.

MERCY HOSPITAL, Pittsburgh, celebrated its annual "Mercy Day" on September 24. Clinics by the staff commenced at 10 o'clock and the annual lecture was delivered by Dr. Irwin Abell, Louisville, Ky. His subject was "Recent Advances in Surgery."

AN HONORARY DEGREE of doctor of medicine was conferred, September 4, in Cologne, Germany, on Dr. Hermann Prinz, professor of pharmacology in the School of Dentistry of the University of Pennsylvania, by Cologne University in recognition of his services to the science of dental surgery.

DR. HAROLD M. GRIFFITH, of Johnstown, sailed for Europe on August 24, where he will spend three months in postgraduate work in ophthalmology. Dr. Griffith will attend the International Ophthalmological Congress to be held at the Hague, will proceed from there to Vienna, and then go to Zurich, Switzerland, for special work with the slit lamp.

THE CHILDREN'S HOSPITAL, Pittsburgh, announces that a generous gift of money and personal service from the Junior League has made possible the establishment of a Nutrition Clinic for undernourished children, aged 2 to 14 years, whose parents are unable to afford the services of a private physician. The fee is thirty-five cents. The Clinic affords a consultation service for nutrition problems and mothers will receive instructions in the preparation of foods.

DR. W. T. HARRISON, fourth U. S. Public Health Service scientist placed in charge of its long investigation of Malta fever, has joined the others as a victim of this extremely disabling disease. He took up the study some months ago after Dr. Edward Francis, discoverer of "rabbit fever" or tularemia, had contracted the malady a short time after beginning work on it. Dr. Francis only recently was able to leave the hospital and Dr. Harrison now has taken his place there.

THE *Porto Rico Review of Public Health and Tropical Medicine* discontinued its publication as a monthly issue beginning with the June, 1929, number and is now being published quarterly (September, December, March, and June) under the name of the *Porto Rico Journal of Public Health and Tropical Medicine*. It is the official bulletin of the Department of Health of Porto Rico and the School of Tropical Medicine of the University of Porto Rico under the auspices of Columbia University.

THE NEW JAMESON MEMORIAL HOSPITAL at New Castle, a million-dollar gift to the people of New Castle and Lawrence County, was formally opened on August 22. Mrs. David Jameson, widow of the donor, has been in charge of the work of construction since the death of Mr. Jameson. The new hospital is as modern as it is possible to build, is six stories high, and has 160 beds. Sixty patients from the old Shenango Valley Hospital are in the new building, which is in full operation. A nurses' home adjoins the hospital, which is also the gift of the Jameson family.

THERE WAS CONDUCTED in August, for the first time in Canada, the primary examination for fellowship in the Royal College of Surgeons, England. Five of Great Britain's distinguished pathologists, physiologists, anatomists, and surgeons conducted the examination at the Toronto University. Twenty-five students of the Do-

(Continued on page xx.)

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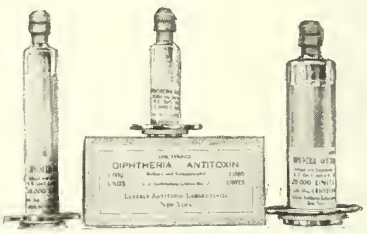

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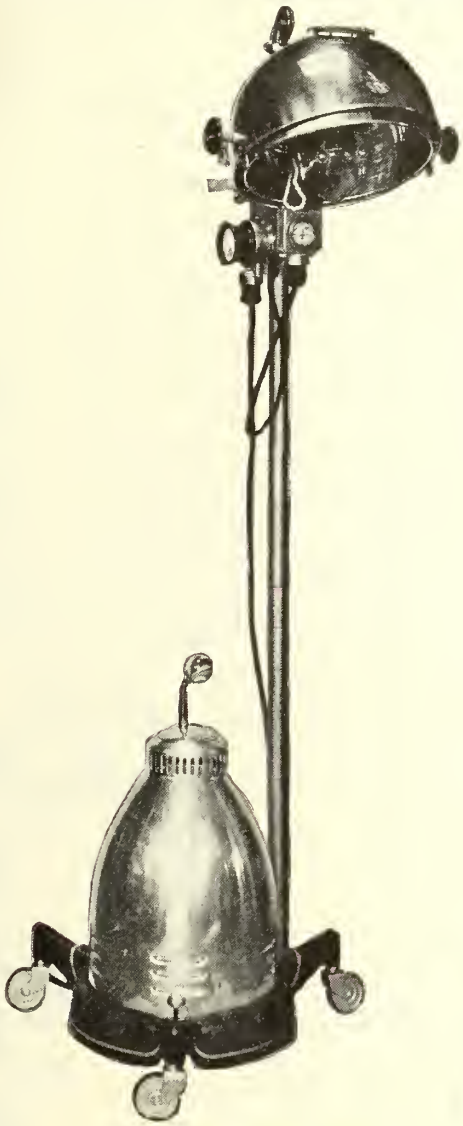

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MEDICAL NEWS

(Continued from page xviii.)

minion Universities were in attendance. If there is sufficient support in Canada, the experiment will most likely be extended to Australia, at Sydney. There is no likelihood of the finals ever being held outside of London. If Canada fails to sustain the examination by support, it is probable that the privilege of taking the examination outside of London will be withdrawn in future years and that Australia will not profit under the plan.

The United States Veterans' Bureau recently has placed in operation three new hospitals in various parts of the country. The new hospital at Tucson, Arizona, has 261 beds and takes the place of the old institution there. The new Portland, Oregon, hospital, which has 313 beds, has made possible the closing of the old hospital in Portland and also the hospital at Tacoma, Washington, which has been returned to the United States Indian Service. The third new hospital is a fifty-seven-bed institution at Fargo, North Dakota, to be operated in conjunction with the regional office. The latter will be a clearing house for cases requiring hospitalization in larger institutions, and at the same time will make possible the caring for a small number of patients from North Dakota.

The Belvedere General Hospital, Pittsburgh, is planning to start an asthma clinic early next year, when 2,000 questionnaires will be sent to victims of the disease asking information as to the prevalence of throat and lung infections in their families. This is thought to be the first investigation in this country of the influence of heredity in asthma. The clinic is one of the several projects to be effected when the hospital successfully completes its present drive for $50,000 to enlarge its building. Dr. Albert Guerinot, bronchoscopic specialist, is the first director of the clinic tentatively announced. If negotiations now being undertaken are successful, this investigation will be conducted in collaboration with the Asthma Research Council in London, England.

Wyoming Valley will wage its seventh annual campaign against diphtheria as an unnecessary and preventable disease of childhood during the weeks of Septemper 30 to October 19, inclusive. In illustrating the progress of the relentless campaign being waged against diphtheria, 33,667 children in Wyoming Valley have been immunized through the free toxin-antitoxin clinics since the movement was first launched in 1923. These figures do not include the large number of children who have received injections at the hands of family physicians. For the six years prior to the establishment of toxin-antitoxin clinics in 1923, recorded cases of diphtheria numbered 1,441 as compared with 833 cases during the past six years in Wyoming Valley, and deaths for the six years prior to the establishment of clinics numbered 266 as compared with 96 deaths from the disease during the past six years. Convenient clinics will be established this year as in the past and a special drive is to be made to reach children of preschool age. The active and voluntary coöperation of physicians and nurses has made the effort to eradicate diphtheria in this community highly successful.

Children who are too young to go to school need protection against diphtheria even more than school children. Diphtheria is particularly fatal to children from three to five years of age and ranks third among the fatal diseases from one to three years. So great is the toll in these years that considerably over half of all deaths from diphtheria occur among the children between the ages of six months and five years. If every child between these ages were immunized, diphtheria would soon be wiped out. The immunity to the disease begins several weeks after the third injection, and requires from three to seven months to reach its height in all persons.

(Concluded on page xxii.)

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MEDICAL NEWS

(Concluded from page xx.)

A RESERVE OFFICERS' CAMP for the training of Medical Department Reserve Officers was held at Carlisle Barracks, Carlisle, Pa., June 15 to 29. The class was composed of 73 Reserve Officers, of whom 30 held commissions in the Medical Corps, 22 in the Dental Corps, 2 in the Veterinary Corps, 4 in the Sanitary Corps, and 15 in the Medical Administrative Corps. There were 1 colonel, 2 majors, 6 captains, 51 first lieutenants, and 13 second lieutenants. The instruction was basic throughout and designed to acquaint the students with the fundamental aspects of the functions and duties of Medical Department units. The scope of the course was limited to the functions and duties of the Medical Department units with combat troops, to include the division.

The following Pennsylvania physicians, members of the Medical Reserve Corps, were assigned to active duty for training during the summer: Col. Daniel M. Hoyt and Major Bernard A. McDermott, Philadelphia, Lieut. Col. John H. Lloyd, Erie, and Col. Thomas N. McKee, Kittanning, at Carlisle Barracks; Capt. Alexander J. P. Conlen, Philadelphia, at Mount Gretna; Major Hervey L. Bates, Philadelphia, and First Lieut. Mario Polanco, Upper Darby, at Fort Howard, Md.; Major Raymond R. Decker, Lewistown, and Major Benj. R. Kohler, Reedsville, at Fort Monroe, Va.; Major Geo. S. Wallace, Marianna, at Tobyhanna; First Lieut. Merrill B. DeWire, Reading, at Fort Hoyle, Md.; Major Wm. C. Sandy, Harrisburg, at Fort Monmouth, N. J.

The following Reserve Officers, having accepted reappointment in the Officers' Reserve Corps without the privilege of active duty or assignment, have been relieved from assignment or attachment to units of the Organized Reserve as indicated: From 79th Division, Capt. Howard M. Kuehner and Capt. Daniel J. Langton, Philadelphia; from 343d Medical Regiment, Capt. John I. Zerbe, Franklin. First Lieut. Clarence H. Ingram, Jr., Pittsburgh, has been relieved from assignment to the 99th Division and assigned to the 7th Station Hospital as Medical Ward Officer.

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HEREDITARY SYPHILIS*†‡

P. C. JEANS, M.D.
IOWA CITY, IOWA

The frequency with which syphilis exists in the general population is still an unsettled question. An abundance of statistical reports may be found, but all of these require interpretation and into this enters a large personal equation. From a critical review of the literature and from our own observations we have reached certain tentative conclusions which will be cited.

Syphilis is found with the greatest frequency among those in the lower social and economic levels. Conservative estimates of the incidence among the men of this class vary from 10 to 20 per cent. As a public-health problem and as a menace to the children this figure is not so important as is the frequency with which the syphilitic men infect their wives. The incidence of syphilis among unmarried women of all classes is relatively low, but after marriage the frequency tends to approach that of men. Among pregnant women of the poor class the Wassermann reaction has been found to be positive in approximately 10 per cent.

Just as women may escape an infection from their syphilitic husbands, so also may the children of a syphilitic mother remain uninfected. The incidence of syphilis among infants of the poor class is approximately 2 per cent, and among older children of the same class slightly less than 1 per cent.

Thus syphilis is not so prevalent as some would have us believe, even in the class of people in which it is most frequent. As the social scale is ascended, we find a rapidly decreasing proportion, and at the same time a greater scarcity of statistical data. An incidence of approximately 1 per cent has been estimated among young men of the better class. If the same incidence relations hold for the women and children of this class as are found among the poor, the amount of syphilis to be found in this group would be practically negligible from a statistical point of view.

The figures cited here relate exclusively to the white race of our own country. That the incidence of syphilis among negroes is several times that among the whites is well known.

Of greatest interest to the student of syphilis is the means by which the infection may be transmitted from parent to offspring. The idea which formerly prevailed that the father could transmit his infection to the offspring without infection of the mother has largely been discarded in the light of our modern knowledge. The most acceptable theory at present assumes that the mother is always infected, and it is from her that the fetus is infected by way of the placenta.

An interesting speculation concerns the manner of infection of the mother and why so frequently her infection shows little or no clinical activity. It is generally conceded that syphilis gains access to the family by means of the adult male member in the great majority of instances. His infection is usually latent at the time of marriage, sometimes even to the extent of a negative Wassermann reaction. Yet in spite of clinical latency he is infectious for his wife. This has been explained by the predilection of the spirochete for the testis. There the spirochete may be harbored without producing gross damage, and from there it may be discharged with the semen. That this occurs in some cases has been proved by experimental observation, and it is plausible to think that this is the common means of transmission.

The majority of mothers of syphilitic children are unaware of their infection, and a large proportion deny any symptoms which can be attributed definitely to syphilis. The reason for this is not entirely clear. It may be explained in part by the inhibiting effect which pregnancy seems to have upon the clinical activity of syphilis. Such an effect has been demonstrated by clinical and experimental observation. Certain theories have been advanced which, if accepted, would present other reasons for reduced activity, but these are entirely speculative.

*Read before the Section on Pediatrics of the Medical Society of the State of Pennsylvania, Erie Session, October 3, 1929.

†From the Department of Pediatrics, College of Medicine, State University of Iowa.

‡Acknowledgment is hereby made to Dr. J. V. Cooke, who has been a coauthor of several publications on this subject and who has had an equal responsibility with the author in the management of the syphilitic children and in the collection of statistical data discussed in this paper.

Also of interest is the relation of the Wassermann reaction in the parents to transmission of syphilis to the children. In determining the diagnosis of syphilis in the child or the source of the infection, often too much importance is placed upon the Wassermann reaction of the parents. That syphilis tends to become latent with time is well known. Since in the average syphilitic family the infection in the father is older than that in the mother, one would expect to find a negative Wassermann in a larger proportion of fathers than of mothers. Similarly one expects to find a negative Wassermann more frequently in mothers of older syphilitic children than in those of the younger children. That such actually is true is indicated by our observations, according to which 44 per cent of the fathers of syphilitic children had a negative Wassermann; the Wassermann was negative in 24 per cent of the mothers of syphilitic children over two years of age and in only 7 per cent of the mothers of syphilitic children under two years of age. The finding of a negative Wassermann in the father is by no means an indication that he is not the source of the infection. A negative Wassermann in the mother, or in both the father and mother, is not valid evidence that the infection in the child is not inherited. We have observed twelve families in which the children had what we considered conclusive evidence of inherited infection and in which both parents had a negative Wassermann. Nor may a positive Wassermann in either or both parents be taken as proof of syphilis in the child.

Whether syphilis can be transmitted to the third generation has not been settled. We have evidence in our own observations that a syphilitic mother may give birth to syphilitic children over a period of twenty years or more. If syphilis can remain sufficiently active in the parent for transmission over such a length of time, it seems entirely plausible that it might do the same in the children. We have noted several instances in which the circumstances were such as to make the syphilis of the third generation most readily explainable on this basis. However, absolute proof is very difficult or altogether impossible. We have no means of excluding an acquired infection in the second generation superimposed upon an inherited one which had become latent or extinct. From the point of view of frequency, transmission to the third generation is more of theoretical than of practical interest.

Another factor bearing upon the transmission of syphilis is the effect of treatment of a syphilitic mother during pregnancy. That proper treatment under these circumstances is highly effective in the prevention of transmission is well known. This is true now with our present remedies in a far greater measure than formerly. It is surprising often how little treatment is required to prevent transmission, though of course treatment short of cure of the mother usually will not afford protection to the infant of a subsequent pregnancy.

It is important to recognize that syphilis is a disease likely to affect the entire family, and when one member is found to be syphilitic others may be. The extent of damage in syphilitic families is difficult to determine in a statistical way. The results of a survey will vary widely according to the means by which the family is selected for study. The smallest amount of damage will be found when the family is selected by means of a syphilitic man. A larger amount will be noted if a syphilitic woman is the means of selection. If families are chosen for study by means of syphilitic offspring, the maximum amount of damage is to be found. Thus statistical studies vary widely in their results and tend to be confusing unless the means of approach to the families is taken into consideration. In various reported family studies the incidence of syphilis in the family has varied from 10 to 85 per cent or more. We have been concerned chiefly with families which have come to our attention because of syphilitic children. Maximum incidence and damage, therefore, are expected.

We have encountered no evidence that syphilis is a frequent cause of sterility. From our own observations it is apparent that syphilitic families which have produced any children are fully as prolific as nonsyphilitic families. Both prematurity and fetal death are two to three times as frequent in syphilitic as in nonsyphilitic families. Approximately 25 per cent of the pregnancies in the syphilitic group result in miscarriage or stillbirth, while in nonsyphilitic families of the same social level only 9 per cent of the pregnancies terminate in this manner.

Syphilis is associated with a high infant mortality rate. When the infant deaths in our clinical material were tabulated, we found that of the syphilitic babies coming under observation in the first nine years covered by the survey 32 per cent died. In the subsequent seven years the mortality was 22 per cent. The difference possibly was due to improvement in the management incident to increased experience. In untreated groups, of course, the mortality is much higher than is represented by these figures.

The determination of the amount of syphilis among the progeny of a syphilitic family is difficult because many of the children have died

prior to the undertaking of a survey. In a group of families in which we were able to examine all the living children we found 70 per cent of the children to be syphilitic. In this group, if all of the dead among the living births were considered nonsyphilitic, the incidence of syphilis among those born alive would have been 60 per cent.

The data from such family studies may be arranged in various ways. One method of stating approximately what happens in syphilitic families is as follows: 25 per cent of all pregnancies result in miscarriage or stillbirth; 20 per cent result in living births, the children of which die before the survey; 40 per cent result in children who are syphilitic and living at the time of the study; and 15 per cent result in children who are living and nonsyphilitic. Another method of compiling the same data shows that 60 to 65 per cent of all pregnancies in a syphilitic family result in a syphilitic product. Though 35 to 40 per cent of the pregnancies result in a nonsyphilitic product, the children of only 15 per cent of the pregnancies are nonsyphilitic and survive to the time of the family survey.

It is to be emphasized that the statistical data recorded above relate only to families which had been brought to notice by means of a syphilitic child. In such families there can be little doubt that syphilis is a cause of considerable morbidity and mortality. It is more difficult to determine the importance of syphilis as a cause of damage in the general population. When considered from this point of view, however, it at once becomes obvious that statistically its influence upon the children of the country is not great.

In considering the effect of syphilis upon the family, a question which arises concerns the dystrophies which are believed to be the result of the effect of syphilis upon the germ plasm when the infection itself is not transmitted to the children. Some of the dystrophies attributed in the past to this indirect effect of syphilis are now classed as distinct clinical entities having no relation to this infection. We believe that proof is lacking that any congenital malformation or inferiority of nonsyphilitic children of syphilitic parentage is due to the effects of syphilis.

The clinical phenomena associated with hereditary syphilis are well known and will not be enumerated. Certain phases of neurosyphilis, however, seem important enough for special discussion. In general, neurosyphilis has a greater significance for a child than almost any other manifestation because of the consequences of irreparable cerebral damage. One point in which we are interested is its frequency. We have noted that 39 per cent of all syphilitic white infants and 30 per cent of all syphilitic white children over two years of age have neurosyphilis, as shown by spinal-fluid examination. Many of these infections are latent, particularly in the infant. The older the child the more likely are we to find clinical evidence of neurosyphilis. Among the white infants 23 per cent, and among the white children over two years 55 per cent of those with positive spinal fluid had clinical neurosyphilis.

The incidence among the colored shows a very definite contrast to that in the white race. Only 23 per cent of syphilitic colored infants have a positive spinal fluid and 19 per cent of these have clinical neurosyphilis. Of the syphilitic colored children over two years, 12 per cent have a positive spinal fluid and of these 13 per cent have clinical neurosyphilis. From this point of view clinical neurosyphilis is four times as frequent in syphilitic white children over two years as in syphilitic negro children of the same age. The spinal fluid was examined from 60 per cent of the syphilitic white children and 57 per cent of the syphilitic negro children over two years which came under our observation. When the entire group of syphilitic children over two years was considered, irrespective of spinal-fluid examination, we found clinical neurosyphilis to be nearly ten times as frequent in the white as in the colored. In fact, clinical neurosyphilis was diagnosed in only two of 209 syphilitic negro children and in only six of 262 syphilitic negro infants. This is of interest in the light of the conception that neurosyphilis is much more frequent in the white than in the negro adult because of greater mental activity and stress incident to the life of the white race. We note that this racial difference extends to childhood and even to infancy, when mental stress could scarcely be a large factor.

Because of the general clinical impression and certain experimental evidence that activity of syphilis in one part of the body tends to inhibit activity in another, we tabulated our neurosyphilitic cases in relation to syphilis in other locations. We noted that of 123 children with latent neurosyphilis, 72 per cent had active syphilis in some other part of the body, while of those with manifest neurosyphilis we could find active syphilis elsewhere in only 12 per cent.

In the diagnosis of syphilis, proper emphasis must be placed upon the clinical phenomena. Some of the manifestations are unmistakably diagnostic. Others are sometimes confused with nonsyphilitic conditions. Also a very large group with latent syphilis exists in which the infection would not be recognized without laboratory as-

sistance. Thus a knowledge of the reliability and vagaries of the Wassermann reaction in children becomes important.

Nearly 40 per cent of all syphilitic infants have a negative Wassermann reaction at birth. In these the reaction first becomes weakly and then strongly positive. By two months of age all syphilitic babies have developed a strongly positive reaction. We have encountered only one exception to this, a baby with syphilitic condylomata whose Wassermann was negative at nine weeks and which remained negative because of treatment which was started at nine weeks. In a few instances nonsyphilitic infants of syphilitic mothers have a positive Wassermann at birth. The reaction rapidly fades and becomes negative before two months of age. Thus in the first two months some difficulty in interpreting the Wassermann reaction is encountered. By two months of age and for several years thereafter the Wassermann is strongly positive in all untreated cases of syphilis and negative in all nonsyphilitic children. In our group of syphilitic children over two years of age, 93.3 per cent had strongly positive and 5.5 per cent had moderately positive reactions. Only 1.2 per cent had weakly positive or negative reactions. One fourth of these (two cases) had strongly positive reactions in the spinal fluid. The remainder had keratitis (two cases) or presented diagnostic stigmata and were latent (four cases). The weakly positive and negative reactions were in older children. The constancy of a strongly positive Wassermann reaction in syphilitic children, particularly when the infection is clinically active, emphasizes the usefulness of the reaction at this period in contrast to that in acquired syphilis in the adult. A negative Wassermann reaction in childhood is equally valuable in excluding syphilis. We have come to the conclusion that syphilis should be diagnosed in children with a negative Wassermann only when the clinical signs are definitely unmistakable.

With certain reservations and exceptions the statement may be made that all hereditary syphilis can be cured. Much depends upon our criteria of cure. If the Wassermann reaction becomes negative with treatment and the patient remains thereafter Wassermann-negative and free from any signs of clinical activity, we believe we are justified in considering him cured of his infection. In a considerable experience with syphilitic children we have yet to observe a clinical or serologic relapse in any child whose Wassermann has remained negative for a year. With the exception of many of the neurologic manifestations, clinical cure is usually attained fairly satisfactorily, though a few lesions such as keratitis may respond slowly. In addition to obtaining a clinical cure the goal also is a serologic cure. The small group of "Wassermann-fast" cases is found to be made up chiefly of older children with active or clinically latent neurosyphilis. The younger the child (the earlier in the infection) the more ready the response to treatment. Syphilis in the older child is more resistant, but with the exception of some cases of neurosyphilis will nearly always respond, though several years of active treatment may be required. Another exception to the statement that inherited syphilis can be cured is to be observed in the relatively high infant mortality associated with this disease.

Children's Hospital.

PLASTIC SURGERY OF THE NOSE*

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A new field has opened in the past ten years for the rhinologist—the field of corrective plastic nasal surgery. I say advisedly for the rhinologist because it is my belief that only one trained in the anatomy, physiology, pathology, and surgery of the nose is best fitted to undertake making changes in its form.

It is very important for the rhinologist to look into this matter of correcting the nasal form, because a good many patients complaining of nasal obstruction come to the rhinologist. Upon seeing a deflected septum, he performs a submucous resection only to find that the patient returns later with the same complaints. A further study will often show that the deflected septum was only part of the abnormality, and that the obstruction to the entrance of air was due mainly to a deflection or twist of the nose proper. It is only when the external nasal deflection itself is corrected that the breathing faculty is restored to normal. This is so obvious that further delving seems unnecessary.

A narrow nose is usually considered as being caused by some nasopharyngeal obstruction, such as adenoids, etc. The removal of the adenoids often does not remove the nasal obstruction complained of, and I feel that the additional remedy for these cases, after having removed a nasal or pharyngeal obstruction, lies in the widening of the entire nasal configuration; in other words, some plastic procedure.

Not only are twisted noses a cause of difficulty in breathing, but also injuries or disease which have caused a depression of the nasal structure.

*Read before the Section on Eye, Ear, Nose, and Throat Diseases of the Medical Society of the State of Pennsylvania, Erie Session, October 1, 1929. This lecture was illustrated by motion pictures.

A falling of the nose on the face will also cause difficulty in breathing and this can be relieved only when the depression is lifted and the structures reformed to as near normal as possible.

Many people have nasal tips that are dependent. Submucous resection will do no good, but the mere lifting of the nasal tip will give the required aid to breathing. Just lift the tip of your own nose and you will notice the marked increase in air volume that enters.

Anatomically the nose is an archlike structure protruding forward on the face, between the forehead and upper lip. It consists of bone and cartilage, with their adherent periosteum and perichondrium, covered by skin and linked by mucous membrane. The bony part of the nose or upper part is stationary. The cartilaginous or lower part is somewhat movable. The bony part is made up of the nasal bones and the nasal processes of the supramaxilla, which are attached to the frontal bones above and the cartilaginous part of the nose below. The cartilaginous portion is made up of the triangular or lateral cartilages, which are in its upper third attached to the quadrilateral septal cartilage, and the greater alar cartilages. A number of lesser alar cartilages, minute sessamoid cartilages, are buried in the dense fibrous tissue of the alæ.

Years ago, that is before twenty years ago, corrections for nasal deformities were attempted here and there, in a desultory manner. The profession did not boost the operations, and when a patient inquired about such a procedure he or she was told that they were not worth while undertaking. Why? Because all these corrections were performed by external incisions, (on either side of the nose and between the eyes), and the resultant scar was often as bad as the original defect. Only the latest textbooks mention the newer necessary operative procedures, but do not go into detail.

The simplest classification of nasal deformities that I find is that of Dr. Ivy: (1) Deformities of shape, where no actual tissue loss is present. (2) Deficiency deformities, wherein there is loss of tissue. In deformities of shape are the hump nose, long nose, dependent tip, twisted nose, and so on. Under deficiency deformities come the saddle nose, cases wherein a part or all of the structure is missing, etc.

In all nasal plastic surgical procedures careful attention must be paid to details, especially in avoiding sepsis of any kind. Careful, painstaking work is always required. Every step must be carefully planned in advance. The patient's general health must be good, but still more important, a thorough examination of the nose and throat should be made so as to be sure that no local infection exists at the time of operation. If an infection is found, the corrective operation must be postponed until the condition is thoroughly cleared up. A negative Wassermann is necessary before considering any operative work.

All instruments, syringes, materials, sutures, etc., must be carefully sterilized before using. As most of this work is performed under local anesthesia, be certain that the anesthetic is sterile and fresh. We dissolve novocain tablets in distilled water and boil for two minutes just prior to operating. Adrenalin chlorid 1:1000, five minims to each ounce, is then added to the solution. Instruments once used are immediately immersed in sterile water. If possible, several instruments of the same kind should be prepared so that it will not be necessary to use the same instrument twice.

The nares are washed with several syringefuls of sterile normal salt solution and the nasal vestibules are packed with alcohol sponges. The outside of the nose is cleansed with green soap solution, sterile water, then alcohol, and lastly painted with a three-per-cent solution of iodin. Alcohol packs are removed from the nares and cotton applicators dipped in a ten-per-cent solution of cocain are applied to each sphenopalatine ganglion and high up along the nasal septum to catch the nasal nerves. With a cotton applicator dipped in ten-per-cent cocain solution, the nasal mucosa lining the cartilaginous framework is swabbed. The entire procedure is repeated in ten minutes. The nasal vestibule is then swabbed with three-per-cent iodin and the posterior nares packed with sterile gauze. The novocain solution is then injected into the nasal structure via each nasal vestibule.

There are two main methods of attack in vogue today: one via the columella, and the other via incision in either or both nasal vestibules. I find it just as easy to work in the nasal vestibule and have had good results and no infections. Usually the hump nose is combined with the long and broad nose, so that in describing this operation the three operative procedures will be considered at once, that is removal of hump, shortening and lifting tip, and narrowing the nose.

(1) An incision is made in the left nasal vestibule below the triangular cartilage, cutting through the nasal mucosa. A sharp dissector or special Joseph's knife is inserted, and the skin over the side of the nose is separated from the nasal tip to the forehead and from the center of the nose to the cheek. The same procedure is repeated on the right side and the skin over the entire nose is free. With a special Joseph's saw

the hump is cut half way through on one side and this procedure is repeated on the opposite side, so that the hump is loosened and freely movable under the skin. The hump is then grasped with a pair of forceps and removed from the nose and any adhesions found in the traction process are cut by a knife or scissors.

(2) A triangular piece of the septum, base anteriorly, with nasal mucous membrane on either side, is removed. This is performed as follows: The columella is separated from the quadriangular cartilage by an incision through the fibrous membrane that connects them. Then the quadriangular cartilage is grasped by a pair of forceps and pulled into one of the nasal vestibules. An assistant retracts the nares, and with a pair of scissors the required triangular piece of cartilage with its mucous membrane on both sides is removed.

(3) The third procedure is to smooth the ragged edges of the nasal bone where the hump has been removed by means of rasps. The large-tooth rasp is used first and then the fine-mesh rasp. If one were to stop the operation here, the nose would be minus its original hump, and when the columella is sutured to the new edge of quadriangular cartilage it would be shorter, but in most cases it would be too broad. In order to overcome this thickness, a different Joseph's saw is inserted, and the nasal process of the superior maxilla is sawed into on a line just in front of the inner canthus of the eye to the lower nasal angle. This procedure is repeated on the other side. Pressure is applied by means of the operator's thumb, and the nasal processes are fractured from the superior maxilla. Then the nasal bones and the nasal processes of the superior maxilla are fractured from the frontal bones by thumb pressure and molded toward each other, thus narrowing the nose.

The operation is completed by suturing the columella to the quadriangular cartilage with horse-hair sutures. Throughout the entire operation the operator and his assistant, when possible, apply pressure over the nasal structures to prevent hematoma formation. The less hematoma the less chance there is of infection.

The posterior nasal pack is then removed, the nasal vestibule cleansed and mildly packed, and the nose is slung up with adhesive-plaster strips. A dental compound is applied to prevent edema. The packing is removed on the second day, the dental compound on the third day, and the adhesive strips on the fourth day. The intranasal sutures are removed on the seventh day, although looked after and cleansed daily.

Time will not permit a description of the procedure for the reconstruction of the sunken nose or the method of implantation of ivory or cartilage.

Recently I have used the three-pocket skin-undermining technic instead of the one large skin pocket, and have found less hematoma and quicker healing. By this method the skin is first separated over the nose on each side to just past the junction of the nasal bones and the nasal processes of the superior maxilla, and via this undermined pocket the hump is removed. If the nose requires narrowing, an additional incision is made within the outer angle of the nasal vestibule and the skin over the nasal processes of the superior maxilla is undermined. This is repeated on the other side. Through these pockets the nasal process is sawed into and the fracturing process is managed as heretofore described.

2009 Pine Street.

ABSTRACT OF DISCUSSION

JOHN J. SULLIVAN, M.D. (Scranton, Pa.): I have been to the clinics abroad, and this presentation compares with the best of them.

THE LEGAL ASPECT OF A PESSARY

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Upon four occasions within two years the Cambria County Court placed upon its calendar suits charging an offense against morality. In two instances death resulted from the alleged abortion. As a consequence of the information, an investigation revealed facts which made it necessary to arrest the physicians identified with the cases. The following narrative was selected from a press story of one of the trials:

Judge McCann's court room was filled to capacity today, sensation seekers naturally gravitating toward the only hearing which promised a thrill. The highly technical testimony of the first day, when twelve medical specialists offered expert opinions as to the best ethical practice, was missing, and the thousands of dollars worth of free advice that was given the crowds the first day was not forthcoming.

Today, however, a new thrill was offered the spectators when the Commonwealth placed three women on the stand as rebuttal witnesses. In his direct examination yesterday, Dr. —— was asked by his attorneys if he had "any intention of committing an abortion" on —— when he inserted the pessary into her vital organs. His answer was: "No, absolutely no. I don't do that kind of work."

The defendant was recalled to the stand shortly after court convened this morning, and under re-cross-examination by Assistant District Attorney Clarence E. Davis, he was asked if he had made the statement on the previous day, and, over the strenuous objection of his counsel, admitted that he had. This made it possible for the Commonwealth to offer rebuttal testimony to impeach the defendant's testimony in chief, and the prosecution seized the opportunity.

Three women told of having called at the office of Dr. —— during the spring and summer of 1925 for the purpose of having pessaries applied to them in order to bring about abortions, the applications, according to the witnesses, being successful in that they produced the desired results.

These witnesses, recruited over night, the defense charged, were brought into court at the suggestion of Mrs. ——, who asserted, after she had been recalled to the stand, that her only interest in the case was to see justice done. She stoutly denied defense assertions that she had become interested in the case because she was receiving a portion of the money that —— (a male) is alleged to have received from the sale of the instruments used by the women.

The spectacular or the suggestive in literature always finds a popular appeal. Certainly, plenty of thrills were afforded by such a discussion of the pessary—a useful invention of ancient times which followed closely upon the heels of the ox cart, but, like many others, because of more modern practices has become obsolete. Nevertheless, the question arises: What is a pessary? If it is what many men and women think it is or are led to believe it is, what is the objection to taking the "trick" out of it or eliminating its use entirely? Certainly its possession or use in the misnamed form should be controlled.

Shocking as such public narratives may seem to the finer element in every community, demoralizing to youth as they surely are, we are told that such a procedure is necessary to further justice. Therefore, if justice be the plea, why not make a public example of an individual who boastfully proclaims herself a voluntary agent in an offense "against morality" and affirms her success by oath. Such an individual is not regarded as an accessory before the fact, but is the principal. It is not a case of immunity, but a privilege against which there is no law unless moral or religious.

Witnesses who present evidence of this nature are generally regarded as being immune to arrest in order to further the cause of justice. Notwithstanding, there should be a way of handling them without reflecting upon the ethics of the court and for the sake of eliminating and discouraging all future irregularities. To permit freedom of such conduct encourages lay transgression and teaches a new form of strategy productive of hi-jacking; while to punish would encourage the unscrupulous practitioner and guard his "tent."

The medical profession should combat this situation through the various county organizations by having laws enforced or new ones enacted which would regulate the manufacture and distribution of any and all appliances intended to prevent or interrupt pregnancy. Irrespective of how or where such appliances have been acquired, the *layman* should be punished for unlawful display or possession. Any appliance made or distributed whose usage might become perverted should be registered.

Technically, the allegation that abortion was due to the insertion of a pessary into the patient's "vital organs" is an error. This term is habitually used by attorneys, and although admitting that the fact to be established is the intention, a shrewd and capable medicolegal adviser would take advantage of this error to influence the jury, even against the facts, which, because of a false conception, would become irrelevant to the subject. If by the term "vital organs" is meant organs essential to life, the insertion of a pessary, without specification, into the vagina cannot be said to be insertion into the "vital organs," since neither the vagina nor the uterus is essential to a continuance of the patient's life. From the viewpoint of procreation or propagation of the species, the sexual or reproductive organs are essential, at least in the greater part. Hysterectomy proves this fact.

The pessary is an appliance specifically designed to correct abnormal positions of the uterus such as a retroflexion, retroversion, etc., by maintaining the replaced uterus in its normal position. It is a retention wall, so to speak. Introducing a pessary in the vagina is placing it where it rightfully belongs. It is modeled with due respect to the size and shape of the average vagina. It would be hard to conceive of a pessary, as ordinarily understood by the term, producing an abortion. Introduction of the appliance ordinarily referred to as a pessary into the cervix would be difficult to conceive of, and would be an expedient much too late for the production of abortion because the cervix would have to be widely dilated before it could accommodate the pessary. The uterus would no doubt be well emptied before the cervix would enlarge to an extent permitting introduction of a pessary. Therefore, when the question arises as to the part played by a pessary in producing an abortion, the particular kind of pessary must be specified. A stem-pessary or "tent," sometimes called a pessary, immediately implies insertion within the cervical canal. As a consequence of said introduction into the cervix, force is applied, and therefore dilatation and contraction follow. The result is interruption of pregnancy.

Herein lies the loophole in the pessary traffic. As the layman uses the term it is a misnomer which might serve a very useful purpose from the fact that a technical error may be used to decided advantage by the medicolegal adviser.

Just such errors as these present an excellent opportunity to influence a jury.

A physician should know the indications for a stem-pessary and all appliances modeled after it or intended for the same purpose. Pregnancy must be excluded before using it, and when uncertain, consultation is the best rule. A therapeutic abortion is said to be justified in the presence of a demonstrable cause which it is impossible to remove or an unknown condition as a result of which death is impending. It is further contended that such a procedure is rarely indicated and that when it seems to be called for it is usually because of the absence of adequate facilities for the proper management of the case or a general lack of knowledge concerning the etiology. Under such circumstances, stem-pessaries and "tents" have been used as the method of choice for producing dilatation of the cervix and contraction of the uterus. The procedure calls for the undisputed establishment of facts without which interference is never justified unless it be to overcome some grave condition—and then only as a heroic measure. Without consultation, such a procedure may be proof of unscrupulous conduct, since consultation is the ordinary practice under such circumstances. Even though the interference is a preventive measure to save a life, in the absence of a demonstrable cause sufficiently grave and which may cease to exist promptly upon evacuation of the uterus, without consultation the morality of the procedure is open to question.

The stem-pessary and "tent" are said to be indicated in the correction of stenosis of the cervix (dysmenorrhea), but the more efficient practitioners contend that such a practice is to be condemned. Because of irritation, laceration, and formation of scar tissue incident to repeated introduction before results are obtained, it is alleged that the method is not one of choice, but is a bad practice. Errors in etiology, the influence which the central nervous system has upon the peculiar conduct of the cervix, and cicatrization are overcome by the radical or operative treatment of the cervix, which is said to afford the best all-round results and to eliminate many of the hazards otherwise difficult to overcome. Because of the danger of carcinoma resulting from irritation of the cervix, those who, through lack of facilities, inexperience, or ignorance, continue to advocate this method are open to censure.

An error of judgment in the use of the stem-pessary or "tent" may be made the basis of either a civil or a criminal suit because of the fact that their use is obsolete. An intelligent study and operative procedure is the method of choice.

The indications for the use of a pessary, in the broad sense of the term, are by no means significant of an intention to interrupt pregnancy. The pessary is used as a support for the uterus and to change the position of the cervical axis in the vaginal vault—a retaining wall, as it were. In the absence of an obstruction of the cervix or any other condition which would exclude its judicious use, it is said to promote pregnancy. It follows, therefore, that something which promotes pregnancy and is not contraindicated even in the presence of an early pregnancy would not be intended to promote abortion. A pessary, unqualified, means nothing with respect to the medicolegal aspect of abortion. It cannot be said that the use of a pessary during pregnancy is unlawful, because pessaries have been worn during the early months of pregnancy as a means of support to the uterus. It seems logical, however, to remove the device as soon as possible after the existence of pregnancy is established.

When the stem-pessary or "tent" is used in the presence of a contraindication such as an unsuspected pregnancy, an unrecognized pregnancy, or as a means of inducing therapeutic abortion, without consultation or an intelligent study the omission not only constitutes an error of judgment but is an irregular practice.

A witness who confesses that she intentionally, knowingly, and willingly requested or submitted to the destruction of a fetus, in spite of any law to the contrary, is equally as guilty as the one who interfered. The price for protection seems to be a favorable outcome. Corroborative evidence is and should be a requisite for conviction.

A death-bed statement is not always reliable. The patient must clearly understand that death impends, and the mind must be free from confusion. Statements made by subjects in a semicomatose condition are open to dispute. They should be made in the presence of two or more responsible parties, preferably the physician and a magistrate. It is not wise to force the issue by suggestions or prompting. Undue pressure must not be used, as this may result in distortion of facts.

The case quoted at the beginning of this paper well illustrates that intrigue and treachery follow closely in the footsteps of those who become enmeshed in the pessary traffic.

Every county medical society should have a committee composed of members not qualified merely by virtue of a medical degree and a

license, but with both as a requisite, with an understanding of medicolegal practice, investigative ability, experience, and a high degree of intelligence, to serve as an advisory board to the court in all matters requiring an understanding of their special field. All preliminary studies and court transcripts should be preserved by this committee for future study and guidance. The committee should maintain a close surveillance of appliances appearing upon the market which might be used to advantage in producing abortions, and should endeavor to check up all unlawful possession of such appliances. It should study methods to control the pessary traffic. All those who call upon doctors for the purpose of procuring either information or interference should be reported to the committee as part of the program of prevention. Cases coming under observation in the line of duty in which there is danger of becoming involved, innocently or otherwise, should be reported to this committee. The innocent third party would thus be protected and mortality would be reduced by prevention of illegal operations.

More vigilance upon the part of the county medical society and a more enlightened attitude towards things medicolegal would promote respect for the profession and instill fear into the lawbreaker. The earlier physicians realize the dangers of this situation, the sooner will this menace become a thing of the past. It must be remembered that the very people who encourage the practice of abortion will demand that the courts protect them by the enforcement of the laws which safeguard their morals, health, and life. "Masterly inactivity" is the safest rule.

801 Front Street.

THE ROUTINE EXAMINATION OF THE EYE IN ITS BEARING ON PRESENT-DAY MOTOR TRAFFIC*

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For the past decade there has been a gradual but constant change developing in many phases of our modern everyday life. Today we are called upon to face conditions that were unknown to those living a generation ago. One of the greatest factors in bringing about this change is the enormous increase in the volume of motor traffic, a condition alarmingly stupendous at the present time and bound to increase as time goes on. A few years ago hazardous traffic congestion was confined mostly to the busy corners of the larger cities, but today city and town suffer alike, as well as the communicating highways all over the country. He who would obey the old Puritanic admonition to observe the Sabbath as a day of rest, and for this purpose takes his family for a quiet drive out into the countryside, finds that about the only quiet period he is able to get is the all too frequent one forced upon him—waiting for the long line of cars ahead of him to move on. In this annoying confusion of cars going in all directions, emergencies are constantly arising that demand not only quick thinking but a normally functioning ocular apparatus in order to avoid serious accidents. Thus the ophthalmologist has this opportunity to make use of his special knowledge to meet the new demands made upon the eye.

The present era has been characterized as the age of speed. We are all warned that unless we speed up in our work we must expect to drop hopelessly out of the race. Speed itself rather than efficiency seems to be the end to be attained, with the result that efficiency is sacrificed for speed. In our particular work, unfortunately perhaps, it is impossible to attempt to keep up with the procession of speeding up our work. A large proportion of the work of the average ophthalmologist consists in the correction of errors of refraction, which requires time and patience. If we are tempted occasionally, from pressure of work, to hurry the examination, it is usually done to our sorrow, as it probably means going all over the work a second time, so that time is lost rather than gained. Any change in the method of examination to which we have been accustomed that would combine both speed and efficiency would be welcomed.

May I offer one suggestion in this respect? Nearly every one uses the method of recording refractive findings that has always been in vogue. Assume a case of mixed astigmatism. You record it in this way:

O.D. $+ 2.50$ sph. $\bigcirc - 0.75$ cyl. ax. $180 = \frac{20}{20}$

O.S. $+ 2.75$ sph. $\bigcirc - 0.50$ cyl. ax. $165 = \frac{20}{20}$

If you stop to think a minute you must see that this is a rather cumbersome method, requiring more time to write and taking up more space on your record card than is necessary. In place of this method, take the left eye first and record the cylindrical finding before the spherical, setting down the formula in this way:

$$165 - 0.50 + 2.75 = \frac{20}{20} \quad 180 - 0.75 + 2.50 = \frac{20}{20}$$

*Read before the Section on Eye, Ear, Nose, and Throat Diseases of the Medical Society of the State of Pennsylvania, Erie Session, October 2, 1929.

By this method the findings of both eyes appear on a single line, the "sph.," "cyl.," and "ax." are eliminated altogether, and the whole procedure requires less time to write and takes much less space on the card. This method was taught me by my old friend and instructor, Dr. Casey Wood, and I have used it exclusively for the past fifteen years, resorting to the old method only when transferring it to the prescription blank for the optician.

Some publishers are apparently trying to help us to speed up our work with the record cards they have devised for us. Both sides of the card are so filled with various diagnostic findings that about all we are expected to do is to sign on the dotted line. A perfectly blank card is preferable to this. In the routine examination of the eye, examination of the visual acuity, condition of the lids, intra-ocular tension, pupillary reactions, the state of the media and the fundi, the muscle strength, etc., need only be mentioned, as they are all a part of every routine examination.

What I wish particularly to emphasize in this paper, because of the modern conditions of daily living just mentioned, is the importance of giving special heed to two phases of every routine examination. First, the motor mechanism of the eyeballs. While it is true that most automobile accidents are the result of carelessness or intoxicated drivers, it is certainly in the range of possibilities that they occur sometimes as a result of exhausted eye muscles or from defective stereoscopic vision. In the attempt to extricate oneself from the jam which is of daily occurrence in all our cities a mistake of only an inch or two in judging depth perception, due to faulty stereoscopic vision, is enough to cause a serious collision.

During the War, any applicant for the Signal Corps department was disqualified who did not have perfect stereoscopic vision even though his eyes were normal in every other respect. Ever since the importance of this feature of the eye examination impressed itself on me, it has been my custom to make this as much a part of every routine examination as the taking of the visual acuity. The best method of making this test, I believe, is the stereoscopic card test. With the Hering test one cannot be absolutely sure that the patient is not guessing, and he may guess correctly. With the stereoscopic card there is no chance for deceit, and failure to state correctly relative distances of the objects on the card is proof of the absence of normal perspective vision. It is unsafe for such a person to drive a car on a public highway.

The strength of convergence and divergence, and the ratio between the two should be tested. Weak ocular muscles can be fatigued to a dangerous point after a long drive. Without going into the matter of treatment of muscle weaknesses, the statement made by one writer last year that he had never seen any beneficial results from muscle exercises is strongly controverted by most observers. Most satisfactory results have been obtained in my own experience by this method. Failure to get results in cases suitable for this treatment is due, I believe, to incorrect or haphazard instruction as to how the exercises should be done. Not only do I give the patient minute instruction in every detail, but have him go through with it in my presence. To be absolutely sure there will be no mistake, he is given the instructions in printed form so there is no possibility of error. I am confident that many of my asthenopic cases have been completely relieved of their troublesome symptoms as a result of this form of treatment.

The second feature of the routine examination I would stress is the examination of the color sense. When the widespread occurrence of this anomaly is considered, it is hard to realize that this condition, which must have existed from very early times, was not discovered until a little over a hundred years ago. Dr. Dalton, the eminent English physicist, was proudly strutting down the street wearing the cap and gown, insignia of the degree Oxford had just bestowed upon him. Seen by one of his brother Quakers, he was promptly taken to task for appearing in public wearing colors. The pious Doctor was unaware that he was wearing anything but black. The news spread rapidly and before long scientists from all over Europe came to see the hitherto unheard of case of a man who could not see red. From that time Daltonism was the subject of universal investigation, and its widespread occurrence among all sorts and conditions of men is now well known. It has been shown that many accidents at sea, in earlier times, occurred through the mistake of a color-blind pilot, who headed his ship in the course directly opposite to that in which the red and green lights should have guided him. Railroad collisions also occurred because color-blind engineers failed to recognize the correct color of the signal lights. In recent years no steamship or railroad corporation will have an employee whose color sense is not normal. Many of the large manufacturing plants are adopting the same precautionary measure.

Here again an exactly similar situation exists in present-day motor-traffic conditions. A color-blind man may learn by daily experience, on roads with which he has become familiar, which

light means "go" and which one means "stop," but even on his own familiar ground he might easily be mistaken in foggy weather; and on an unfamiliar road where the color shades might be slightly different from the ones he has learned at home, he is a source of danger to himself and others. Because of this situation the color sense should be tested in every routine examination by one of the approved methods. Of the large number of tests that have been devised, most of them modifications of the original Holmgren worsteds, the one devised by Jennings has a number of advantages which makes it a most practical test for the private practice. A permanent record can be kept. If a group is being examined at the same time, a color-blind individual among them will get no help from watching the others. Only one among the thousands whom I examined with this test succeeded in cheating, and he was subsequently detected.

It will be remembered that the mental attitude of applicants for the aviation service was exactly opposite to that of the men drafted for other branches of the service. Aviation was something new and different; there was a sort of romantic glamour attached to this unique method of warfare. The boys were so enthusiastic to get into it they acted on the principle that all is fair in war, and would resort to whatever means they could to conceal any physical defect that would disqualify them. Most color-blind people discover their defect in early life, but not a few of these boys in their early twenties were ignorant of their condition. Some of those proved to be color-blind resented the implication that they were not normal. In cases of this sort, the Jennings test was supplemented by the pseudochromatic chart test of Stilling. By this method the applicant can see for himself that he cannot see color as the normal eye does. For the examination of railroad employees and seamen, a lantern, such as the one devised by Edridge-Green, is perhaps the most practical test. It is furnished with semi-opaque disks which can be placed over the light, thus giving the light the appearance it would assume when looked at through foggy or misty atmosphere.

This subject leads directly to that of the routine examination of the eyes of school children. We are glad to note that as a result of these examinations eyesight has been conserved in a great many instances, and the carrying out of this procedure is a marked advance in our economic development. But the method of examination as conducted in the schools where it is adopted falls far short of being a true test of actual eye conditions. In most instances the only thing absolutely demonstrated as a certainty is that the child is not myopic. Medical men who have had charge of these examinations confess that many cases of hyperopia and astigmatism escape detection and are given certificates of normal vision. In a recent thorough study of eye conditions among school children, conducted by the U. S. Public Health Service, it was found that nearly a fourth of those who passed as having standard vision or better, in a reëxamination under a cycloplegic, were found to have only 30 per cent of normal vision or worse. This survey demonstrates that instead of the often quoted figure of 12 per cent of defective vision among American school children, 40 per cent is nearer the correct proportion.

Theodore Whittington of the Moorfield's staff, from his experience of more than four thousand examinations of school children, strongly insists that the mere reading of test types should never be the sum total of sight testing. As an illustration of a mistake liable to be made, he mentions a young lad who read 6/6 and was given a certificate of normal vision. In a reëxamination shortly afterward under a cycloplegic, he was found to be hyperopic to the extent of 6 D.

These school examinations as conducted at the present time are solely for the benefit of the scholars themselves. There is another side to the picture, however, which should receive serious consideration. The aviator has been called the eye of the army. The whole ocular apparatus of the flier must be perfect, not for his own safety alone but as a protection to the entire army. The case of a man driving a car through crowded streets is in many ways analogous, and every possible precaution should be taken to see that he is fitted to do this without endangering the lives of others.

When it is considered that in the writer's city automobile fatalities number approximately a thousand a year, we cannot afford to ignore any precautionary measure that may help to lower this ghastly toll. At the end of high-school life a large proportion of the boys and many of the girls are going to drive their own cars. The entire population should have the right to demand protection from the danger of accidents due to incompetent drivers. I hope and believe that the time will come before very long when boards of education will realize the importance of this situation, and inaugurate a system of examinations near the end of the school career to supplement the one made at the beginning of school life. My suggestion would be that during the final year of high school every scholar be examined under a cycloplegic by an ophthalmologist, in order to determine the exact

condition not only of the refraction but also of the ocular muscles, the stereoscopic vision, and the color sense. I would be in favor of making it illegal for any one to drive a car on the public highways who cannot successfully pass these tests.

30 North Michigan Boulevard.

CHILD-GUIDANCE CLINICS AS CONDUCTED IN THE PUBLIC SCHOOLS OF ERIE, PENNSYLVANIA*

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WARREN, PA.

"Child-guidance clinic" has become a popular term, concerning which many talk voluminously, and of which few have much practical knowledge. As a matter of fact, there is such a wide variation in the ideals and structure of these clinics that the name means nothing, except that some effort is being made to better the conditions of children. The Commonwealth Fund popularized the name by establishing ideal clinics in an attempt to prove their practical value and create standards of organization. These Commonwealth Fund child-guidance clinics were placed in large centers of population and were in operation from one to two years. In most of the cities where such demonstrations were given, the citizens found them of sufficient value to warrant continuation and raised funds for the purpose.

These ideal clinics undertook to make a complete study of each problem child, including heredity, environment, physical condition, and psychic make-up, and used every available method for establishing the patient as a stable, valuable economic unit in the community. A clinic of this type employed the full-time services of two or three neuropsychiatrists, at least two psychologists, seven or eight psychiatric social workers, a secretary, a statistician, and several stenographers. In addition to the sixteen or eighteen full-time workers, many volunteers gave part-time service, and local agencies of various kinds were called upon very freely. With all these workers, demonstration clinics could make only about three hundred individual studies in a year at a cost of approximately $60,000. It is obvious that only large cities can afford such a great expenditure. Rural districts and small cities are attempting to secure as much benefit from work of this type as their means permit. It is my wish to relate the efforts made by Erie, a typical smaller city, to aid the mental welfare of its children.

*Read at the General Meeting of the Medical Society of the State of Pennsylvania, Erie Session, October 1, 1929.

In 1902 truancy was recognized as a serious community problem, and a class for truants was established in the public schools. In 1915 a supervising principal with psychologic training began giving part-time service to the psychometric examination of children referred by the Superintendent of Schools. In 1917 an experimental group of retarded pupils, selected by psychometric tests, was organized with a specially trained teacher in charge. In 1920 the Superintendent of Schools found that there were many children who were persistent school problems, yet existing facilities failed to find the reason or prescribe a satisfactory method of procedure. The need for neuropsychiatric advice was recognized and, fortunately, Dr. Wm. W. Richardson was then located in the city. He freely gave his services and amply demonstrated the value of neuropsychiatry to the schools. When he left the city, Mr. John C. Diehl, Superintendent of Schools, was insistent that the work should continue, and wrote to the Department of Welfare for aid. Dr. Wm. C. Sandy, Director of the Bureau of Mental Health (Department of Welfare), referred the inquiry to Dr. H. W. Mitchell, Superintendent of the Warren State Hospital.

The present clinic was established in the fall of 1922. There were then six classes for retarded children. The teacher supervising the development classes volunteered to act as social worker on her own time. Through her efforts, a record was made of heredity, environment, health, school progress, and social adaptability. The school psychologist furnished psychometric ratings and psychologic studies. School physicians contributed general physical examinations. The form of study for each child was that developed by Dr. William Healy in his survey of Massachusetts schools. About once a month a member of the medical staff of the Warren State Hospital conducted a neuropsychiatric clinic. In 1924 the Public Charities' Association of Pennsylvania met at Erie. This aided in stimulating public interest in mental hygiene, and was at least partially responsible for the organization in 1925 of the present Child Guidance Clinic of the Erie Public Schools. Miss Zoe I. Hirt, psychologist for the schools, has been the guiding spirit, and she is largely responsible for the development and formation of the present structure.

The School Board at this time authorized the development of what is called the Child Study Department. This consists of the psychologist, a secretary-statistician, a visiting teacher, and a supervisor of special classes. The psychologist makes psychometric tests to estimate the proba-

ble accomplishment of children in their studies. All first-grade children are examined individually. Children are again examined by group tests when they enter the Junior High School, and finally some time during the high-school course. Many other children have tests because of personal difficulties or school needs for information concerning teaching requirements. Last year, 1,785 children were examined by individual tests and 6,508 by group tests. The results of all these examinations are classified, indexed, compiled into graphic records, and filed by the statistician. She also acts as stenographer and secretary, attending to all reports, correspondence, and records of interviews.

The visiting teacher has teaching experience, knowledge of psychology, and training in social case work. Her function is to locate problem and misfit children in the various schools and to endeavor to find the basis of their difficulties. Such children are brought to her attention by the psychologist, teachers, court probation officers, county, visiting, and school nurses, attendance officers, Family Service Society, Mothers' Assistance Fund, relatives, and other agencies. In each case she procures information of the type of trouble the child is having from the standpoint of his teacher, the parents, and the child. The difficulties of many such children are very simple once a trained teacher of this type is able to obtain all the facts. A word of advice to the right person or an understanding interview with the child may change for the better the whole course of what was stormy school life. Last year, the visiting teacher made 759 visits in the interest of 178 children.

The supervisor of special classes has under her control twenty classes for retarded or slow-moving children, three classes for orthopedic patients, one ungraded open-air class, three classes for the deaf, six classes for speech correction and lip reading, and one class for sight conservation. She coöperates with the visiting teacher and psychologist in the school treatment of referred cases. These four full-time school employees occupy a joint office where they coöperate in the classification of all children, and in the study, school placement, and readjustment of problem types. This department is able to care for the ordinary simple problems of childhood and arbitrate misunderstandings of children, relatives, teachers, and school regulations.

There are some children whose maladjustment needs further study. These are referred to the Child Guidance Clinic which functions as a subdivision of the Child Study Department. The visiting teacher then becomes a psychiatric social worker and assumes responsibility for a complete record of the child compiled according to psychiatric standards. This means finding out everything possible about the child from all available sources. She secures from the parents a history of heredity, development from prenatal time to the present, physical illnesses, social adaptability, environment, practical abilities outside of school, habits, and delinquencies. School agencies furnish records of scholarship, deportment, physical examinations, and general observations of teachers. The family doctors coöperate by furnishing records of their findings during various illnesses. The psychologist makes more intensive studies and submits an opinion based upon her various examinations. At least once a month clinic dates are set and the neuropsychiatrist visits Erie for a two-day period. The problem child, the next of kin, and the record are brought to him by the visiting teacher acting in the capacity of psychiatric social-service worker. A neuropsychiatric examination is made, and an estimate of the child's difficulties attempted from a medical and psychiatric viewpoint based upon the record, the personal examination, and supplementary information from interested persons present. The psychiatrist, social worker, psychologist, and next of kin then discuss the problem, and an agreement is reached as to the best practical method of procedure.

Through the Child Study Department all educational facilities of the school system are available. The social worker assumes responsibility for adjusting problems connected with other children or teachers, moral encouragement of the child or relatives, improvement of home environment, and securing the aid of outside social agencies. The supervisor of special classes arranges for proper school placement. The clinic offers no medical treatment. Many of the children have serious physical troubles, and whenever these are found, the name of the family physician is obtained and the relatives are urged to seek his aid. A copy of the psychiatrist's report to the schools is sent to this physician with a letter explaining that the patient has been referred to him. After the clinic examination, the social worker keeps informed regarding the child's progress and guides the fulfillment of recommendations.

During the past school year, 113 patients were brought to this Child Guidance Clinic. There were 58 whose basic intelligence was low on account of heredity, prenatal or birth injuries, or organic disease of the central nervous system during early infancy. The remaining 55 were intelligent children brought because of various troubles; 7 were serious disciplinary problems at home but doing well at school; 9 were mak-

ing very poor progress in school, in spite of being bright and intelligent; 10 had inadequate homes with inadequate moral or physical care; 12 were persistent truants or petty thieves; 18 had serious physical troubles such as epilepsy, chorea, neuroses, malformations, tuberculosis, and hereditary syphilis. The visiting teacher's last report states: "It is interesting to note that in almost every case poor scholarship is directly influenced by poor physical condition or poor home environment or both." This holds true for imbecile or genius. A little aid in the improvement of health or environment frequently transfers demotion to promotion. It is the aim of the school clinic to give this bit of aid to troubled childhood.

State Hospital.

ABSTRACT OF DISCUSSION

J. ALLEN JACKSON, M.D. (Danville, Pa.): This paper brings out three very concrete and definite points: (1) That all those things which have been put forth as a result of the mental-hygiene movement are perfectly applicable in practice to the conduct and behavior of human beings. (2) That the state mental hospital bears a very dependable relationship as a mental-health center which can accomplish many good things provided it has the coöperation of the courts, the schools, the practitioners of medicine, and society as a whole. (3) That the message of mental hygiene has a practical application and is not the result of untried plans or ephemeral impulse. I am sure, as the years go on, this Society will appreciate the great work that is being done by the Department of Mental Health at Harrisburg and at the various State hospitals throughout Pennsylvania, and as its members become more familiar with the mental-health movement and its contribution to medicine, society, industry, and particularly the public-school system of this great commonwealth, they will put their shoulders to the wheel and help in the furtherance of the movement.

We have a paradoxical situation in the public schools which has been brought out by Dr. Pike of the State Hospital at Danville. The laws of the State require a child to attend school until he is sixteen, and there are children whiling away their time and the time of their teachers in the third and fourth grades, with no hope of going any farther, because their intellectual faculties do not make it possible for them to progress. Yet the law says that they must remain in the public schools, even though nothing is done to improve them from the standpoint of vocational training—a training which they would be capable of attaining.

Dr. Quigley, delegate from the Association of School Physicians, has described the establishment of this new organization. I do not know of any more important message he can take back than that of mental hygiene, showing the relation of the school physician to the mentally handicapped children. These children are quite a problem in the public schools, especially in those that are not fortunate enough to have able guidance by members of the medical profession associated with the public-school system.

A CASE OF UNDULANT FEVER

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ROSEMONT, PA.

So much has appeared in the literature in recent months on the subject of undulant fever that the recording of a single case seems superfluous, and the only reason for doing so in the present instance is to show how one may flounder about in the dark until the *idea* of undulant fever occurs, after which everything is as clear as day. Possibly others have had the same experience.

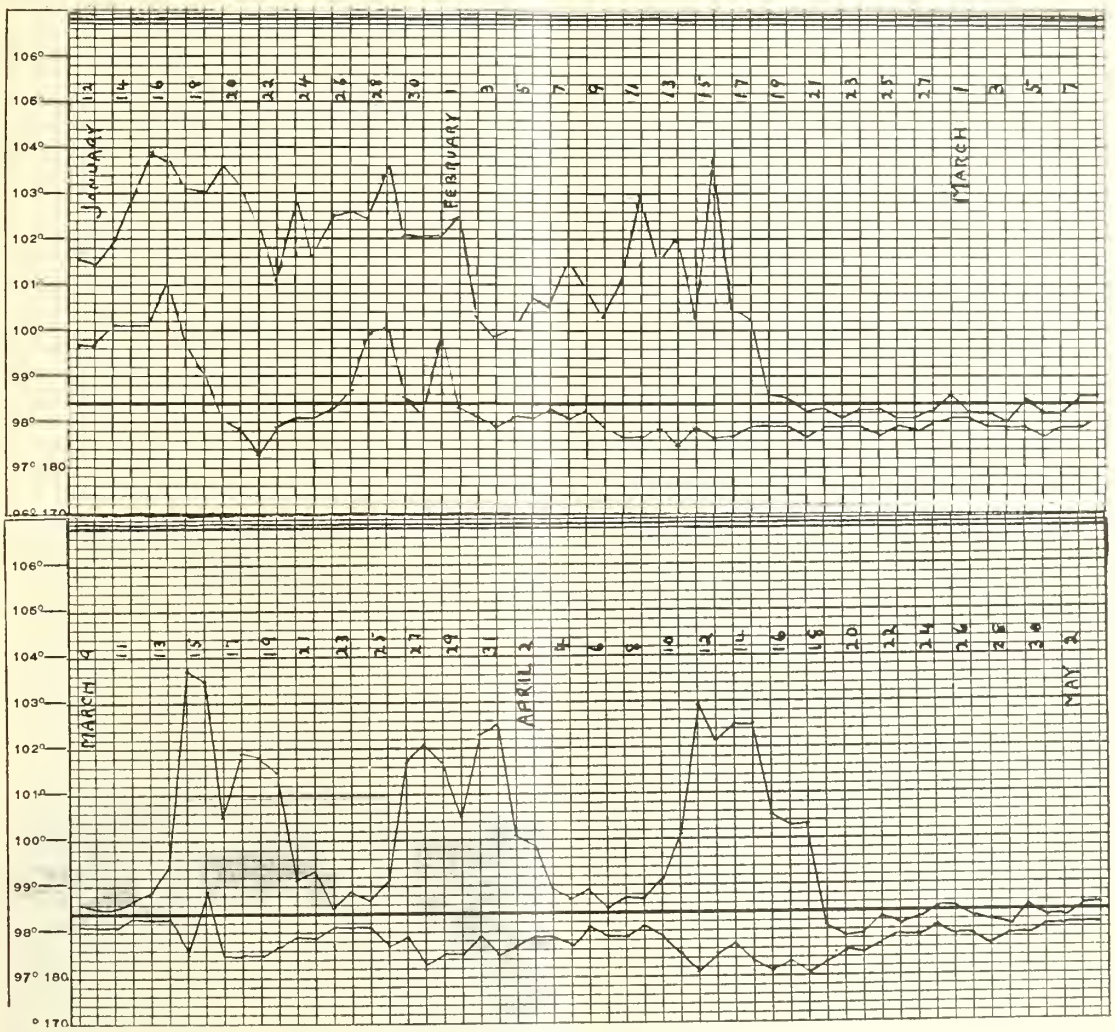
A dissertation on the disease is uncalled for, but it may be worth while to remind readers that only 14 per cent of the herds examined in Pennsylvania have been found free of abortus infection; that 60 per cent of the milk samples from infected cows contain the specific organism; that the State Health Department has found twenty-one positive agglutinations in blood specimens negative to the Widal test; and that, including the two cases reported by Dr. Kern from the University Hospital, only four or five, to the knowledge of the State Department, have been correctly diagnosed prior to the laboratory report.

F. W. S., aged 36, stock broker, previous history unimportant, was first seen January 13, 1929. His illness had come on gradually about two weeks before with fever which his sister had accidentally discovered while they were playing bridge. He remembered having had a pain in his right shoulder for a few days, weakness and catarrhal symptoms which he ascribed to grip and three distinct chills which made him shake. A grip epidemic was widespread at the time.

Examination showed a man rather bright mentally, able to go to the bath room in spite of a temperature which sometimes reached 104°, complaining of nothing but a dry mouth and throat, a slight cough, headache, and distaste for food. Physical examination was entirely negative, the only surprising finding being a leukocyte count of 5,500. The possibilities seemed to be: influenza, unusually prolonged; typhoid or paratyphoid, although the acute mentality made it seem unlikely; tuberculosis, with signs lacking; subacute endocarditis, also with signs lacking; and malaria, most unlikely.

About seven days later, it was noted that the liver dullness was enlarged upwards, the fourth interspace anteriorly being flat to percussion. The heart was not displaced, however, and the liver was not palpable at the costal margin. In spite of the low leukocyte count, it was concluded that fluid had formed as the result of a diaphragmatic pleurisy, the only evidence of which had been the pain in the right shoulder previously mentioned. Subdiaphragmatic fluid was considered, but seemed improbable as there was no downward displacement of the liver, and no sufficient cause.

A needle was introduced close to the nipple and no fluid found. Dr. Pillmore made a bedside picture of the chest with the portable apparatus, the patient sitting up. His report was as follows: The right diaphragm appeared abnormally elevated, smooth and regular, and there was no evidence of fluid. The blotchy shadows at the roots of each lung and the linear shadows along the air tubes were heavier, especially on the right side,



Temperature chart in a case of undulant fever.

than in the normal individual, possibly due merely to congestion, but probably a diaphragmatic pleurisy without fluid. The left lung was clear.

In spite of this evidence, a needle was again introduced nearer the midline, without result. Two blood cultures were negative. There were additional attacks of chilliness followed by drenching sweats, but with all, a continued normal leukocyte count. A consultant was called. We both agreed that neither spleen nor liver was enlarged. On his advice, a needle was introduced posteriorly at the angle of the scapula, again without result.

Meanwhile, it was noteworthy that although the temperature continued high and irregular, suggesting a septicemia, the patient was apparently not losing ground, and finally the fever came to an end about February 20th after having been present for fifty days. The abnormal signs in the chest entirely cleared up, and the diagnosis was plastic pleurisy of influenzal origin.

There was now an afebrile period of three weeks' duration, and the patient was preparing for a month's holiday away from home when he developed a slight sore throat, coryza the following day, and then a temperature up to 104°. During the next six days, there were chills, high fever, and drenching sweats in rapid succession, the signs previously noted in the chest reappeared, and for the first time the spleen was distinctly palpable.

The possibility that we were dealing with a case of undulant fever occurred to the writer three or four weeks after the onset of the illness, as the result of reading of an outbreak in New York State, the details of which were published in the January number of a current medical digest. However, when Dr. Osler, the final authority in nearly everything, was consulted, his definition of Malta fever as showing "undulatory, pyrexial relapses, profuse sweats, rheumatic pains, arthritis, and enlarged spleen, tended to throw one off the track, for there had been no undulation of temperature, no rheumatic pains, no arthritis, and no enlarged spleen. Moreover, the blood culture was negative, and there were physical and x-ray signs of abnormality in the right chest.

When the relapse occurred, however, it was evident that something out of the ordinary was at hand, and it was discovered that the patient's serum would agglutinate the Brucella melitensis var. abortus in 1:640. This was later confirmed at Jefferson Hospital and also by the State laboratory. Our signs of fluid resolved themselves into a swollen liver!

In the accompanying chart, the highest and lowest temperatures for each day are recorded, illustrating the violent fluctuations which have occurred. Anemia, mentioned by some writers, has not been a prominent symptom. Really, the patient is in surprisingly good condition for one who has been ill so long, and if I were asked what had impressed me most in seeing a case of undulant fever, I should say the apparent lack of toxicity possessed by the melitensis organism, resembling malaria in this regard, as it does in its pathology. A low leukocyte count with a very irregular temperature should also make one suspicious. The patient is steadily gaining strength, though his temperature is now undulating in a characteristic manner. Treatment, consisting of quinin and neutral acriflavin intravenously, has apparently had no effect.

Just a word about the milk supply. In this case, it came from two sources, both unpasteurized. One was a certified milk from a herd known to be infected with abortus; the other was uncertified from two cows which have been found to be clean. The patient regularly drank a quart of milk daily. There has been no known contact with hogs, and he is positive that he has eaten no pork or sausage for the past six months, which would tend to disprove the theory, held by some breeders of cattle, that human infections are caused only by the porcine strain of melitensis.

MUMPS COMPLICATED BY THYROID-GLAND ENLARGEMENT

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PITTSBURGH, PA.

While enlargement of the various salivary glands, testes, and ovaries is mentioned in textbooks as a fairly frequent complication of mumps, involvement of the thyroid gland in this disease is either a rare occurrence or is disregarded by writers of articles on mumps.

The three following cases have been seen in the past eleven years by the writer. The first was that of a colored medical officer in the army whose thyroid gland enlarged simultaneously with the left parotid and two days after enlargement of the right parotid gland. The course of the disease was prolonged but otherwise uneventful, and the thyroid had apparently returned to its normal size in three weeks.

The second case was that of a girl five years old, who had been seen at intervals since birth. On the third day of a left-sided case of mumps the thyroid gland became universally enlarged, and the child was extremely ill. The next day the right parotid gland was enlarged. The thyroid gland decreased in size with the recession of the fever, but there is still (three years later) slight enlargement of the gland without demonstrable signs of hyperthyroidism.

The third case was that of a girl of fifteen years in whom the thyroid, which prior to the mumps was barely visible and palpable, enlarged moderately with a right-sided case of mumps. There was also marked tenderness over the epigastrium and left inguinal region, suggesting possible pancreatic and ovarian enlargements. Menstruation, which occurred during the course of the disease, was much more painful than usual, but returned to normal the following month.

Why the thyroid is not more frequently enlarged during the course of mumps is difficult to say. Its relationship anatomically is just as close to that of the parotid glands as is that of the ovary or testis. Perhaps closer observation of the thyroid during mumps will reveal enlargement more frequently than is usually considered to occur.

121 University Place.

TRAUMATIC INJURIES TO THE TRACHEA

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The infrequency of traumatism to the larynx and trachea as compared with other portions of the body is familiar to those engaged in this particular field. The disastrous consequences sec-

A case of traumatic injury to the trachea. See text.

ondary to an injury of these parts and the immediate necessity for a proper surgical procedure have led to the following report of a case.

H. W., aged five, had been riding on a large truck. On suddenly alighting, he was struck by a small passenger car, the left forewheel passing over his entire cervical area. He was rendered unconscious immediately, and was taken to the hospital by bystanders. He was in the emergency room when I first saw him.

He was unconscious and showed evidences of marked shock. The most prominent symptom was general emphysema, subcutaneous in character, which extended from his head to his lower extremities, including the entire body. The intern had attempted to relieve this emphysema and respiratory embarrassment by doing an acute puncture of both precervical areas. It appeared to me that the better procedure would be a direct bronchoscopic examination of the larynx which would enable us to decipher the number of cartilages involved and their direct location.

A child's-size bronchoscope was introduced without an anesthetic, revealing an oblique severance of the anterior portion of the fifth and sixth tracheal rings. During this procedure the child was in a very precarious condition. Allowing the bronchoscope to remain in position, and with the direct introduction of oxygen through the bronchoscope, tracheotomy was done immediately. No difficulty was encountered in this, and the child was returned to the ward. After a rather uncertain convalescence of perhaps five to eight days, during which the emphysema was gradually absorbed, he recovered.

When next seen, about two years ago, there had been no disastrous results, and he was attending school and acting in the capacity of newsboy.

The photograph, taken about three weeks after the operative intervention, shows in the area anterior to the sternocleidomastoid muscles on both sides the incisions which had been made by the intern, also a moderate keloid formation resulting from the tracheotomy.

604 Westinghouse Building.

A Case of Eventration of the Diaphragm.

EVENTRATION OF THE DIAPHRAGM

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HARRISBURG, PA.

The following case of eventration of the diaphragm is reported to call attention to the fact that the combination of physical signs encountered is apparently pathognomonic of the pathology and, if kept in mind, similar cases may be recognized and properly certified to in the many instances in general practice where x-ray or postmortem examination is not possible.

An Italian woman, aged 25, primipara, after passing through about nine months of pregnancy, was delivered without instrumentation or medication after five hours of labor pains. For thirty-six hours prior there had been a constant leaking of amniotic fluid. The presentation was right occipito-anterior. Immediately after expulsion, the child was seen to be cyanotic in hands, feet, and scalp. Spontaneous respirations were feeble, and were encouraged artificially. The hand was placed on the chest four minutes after delivery, and the location of the cardiac impulse was found on the right side. Fifteen minutes later the child was examined more thoroughly. The respirations were spontaneous and shallow. A dusky cyanosis of the scalp, hands, and feet was evident. The two sides of the chest were symmetrical and moved synchronously and apparently with equal excursions. The percussion note was practically of the same resonance on the two sides, but breath sounds were absent on the left and of a harsh bronchovesicular type on the right, with some moist râles. The heart was on the right side of the chest. The heart sounds were clear and no murmurs or adventitious sounds were heard. The pulse was not excessively rapid, and was of good volume.

Fluoroscopic examination later revealed an eventration of the left diaphragm, with most of the hollow abdominal viscera in the left thoracic cavity. There were several short attacks of extreme cyanosis with respiratory distress, and death occurred about thirty hours after delivery. Permission for a postmortem examination could not be obtained.

The actual situation was disclosed by the x-ray examination, but should it not have been recognized by the physical signs alone? The combination of symmetrical expansion with bilateral resonance, absent breath sounds on the affected side, and the ectopic heart is the theoretical array of physical signs that would be expected in this anomaly, and can hardly be simulated by any

other condition of the newborn. Although one is not justified in drawing final conclusions from a single case, in view of the physics underlying the clinical signs of this anomaly, he is warranted in raising the question whether or not the syndrome is specific.

120 State St.

Case Reports*

PERIRECTAL ABSCESS DUE TO GAS BACILLUS

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A woman 34 years of age, who had never had a serious illness, was first seen June 14, 1928, complaining of distressing pain in the rectum. There was no induration nor swelling. The next day there was slight induration posterior to the anus, but no soft point in the area. The pain was more severe, and there was a slight elevation of temperature.

On June 16th the pain was intense, and there was an immense boggy swelling posterior to the anus and extending entirely across the buttocks, with a gangrenous spot about three inches to the right of the anus. The patient was admitted to the hospital at 2 p. m., and on the way there the gangrenous spot ruptured, emitting a large amount of foul-smelling pus and gas bubbles. The abscess area was crepitant to the touch. Suspecting the presence of the gas bacillus, a culture was made from the pus. A 24-hour growth was negative, but in 48 hours the culture was positive for the Bacillus aërogenes capsulatus (Welchii).

Using ethyl chlorid locally, the abscess was then laid wide open for about five inches each side of and posterior to the anus. The abscess cavity extended several inches up behind the rectum.

The urinalysis and Wassermann test were negative, as was the test for Vincent's organism. The leukocytes numbered 17,200.

As soon as it could be secured, which was June 19th, 40 c.c. of perfringens antitoxin was administered intravenously. Within a period of six hours the patient changed from a semiconscious condition to a feeling of bright cheerfulness. There was no more pain, her appetite returned, the foul odor disappeared, and she made a rapid recovery, leaving the hospital eight days after receiving the antitoxin. She was left with an anal fistula, which was excised two months later, followed by complete recovery.

*Read before the Section on Surgery of the Medical Society of the State of Pennsylvania, Erie Session, October 3, 1929.

The temperature ranged from 100° on admission to 97° four days after administration of the antitoxin. The pulse was 118 on admission, and dropped to normal a few hours after she received the antitoxin. The respiration rate was 30 on admission, and became normal the fifth day.

838 Funston Avenue.

DYSPHAGIA DUE TO HYOID SPURS; OPERATIVE RELIEF

ETHAN FLAGG BUTLER, M.D.
ELMIRA, N. Y.

The patient was a white farmer, 62 years of age, who first reported for examination at the Robert Packer Hospital on February 23, 1928. He complained that for a year he had had difficulty in swallowing dry food, although at no time had there been trouble in swallowing liquids. Dry food lodged in the pharynx, requiring a drink of water to wash it past some obstruction. During the past few months there had been loss of weight on account of decreased food intake.

On admission, temperature was normal. The patient was poorly nourished, but in other respects a healthy looking man. General physical examination was essentially negative. Fluoroscopic examination of the esophagus was reported as follows: "Constant filling defect of upper third of esophagus. Mild cardiospasm. Chest shows marked hilus infiltration with mild opacity of apices. Few calcified glands."

Esophagoscopic examination under local anesthesia revealed an abnormal mass, apparently arising from the left posterolateral wall of the esophagus, 11 cm. from the superior incisor teeth. It projected 5 mm. or more into the lumen of the esophagus. The mucosa was smooth and apparently normal. The esophagoscope did not pass this obstruction. A specimen was not taken. The tumor was not palpable by external examination of the neck.

In the belief that this was a neoplasm involving the walls of the esophagus, the patient was advised to accept operative treatment. He did not do so, however, until June, 1928, by which time the dysphagia had increased and there had been additional loss of weight. The pharyngeal tumor appeared unchanged.

On June 8, 1928, under ethylene anesthesia, a gastrostomy was performed and forced feeding was instituted.

Four days later, under rectal anesthesia, the definitive operative steps were carried out. Examination of the pharynx could be more thorough at this time, and was reported as follows:

"Confirming previous examination, there was found on the left posterior wall of the pharynx a pedunculated mass, which was movable but bony hard. Over this mass the esophageal mucosa looped itself hammockwise. With a finger on the outer surface of the neck, it was possible to identify this protuberance as a horn of the hyoid bone. It was also possible to pass the finger further down the esophagus and locate a second protuberance projecting into the lumen of the esophagus, this latter one apparently arising from the left superior cornu of the thyroid cartilage. So far as the examining finger could determine, it would be easily possible for a food bolus to impinge across either of these projections and be impeded in its downward passage. Apparently it is not malignant, in spite of the previous diagnosis."

Immediately upon conclusion of the esophagoscopy, the patient was placed in reverse Trendelenberg position and, proceeding under the same rectal analgesia, an incision about 8 cm. long was made in the left side of the neck, parallel to and about 1 cm. anterior to the sternomastoid, at the level of the thyroid cartilage. The larynx and pharynx were easily exposed, and the two spurs could be palpated without difficulty. An approach was made through the intrinsic laryngeal musculature toward the outer surface of the thyroid cartilage. Musculature and perichondrium were stripped from the spur and it was excised in toto. The same procedure was carried out as to the hyoid spur—it was approached through intrinsic pharyngeal musculature and resected in toto. In neither instance was the mucosa damaged. The pharyngeal musculature was caught together by interrupted plain catgut sutures, and the skin edges lightly closed over a precautionary drain. The wound remained clean and healed rapidly.

Following this operation, the gastrostomy was still used for feeding purposes, although small amounts of water were permitted by mouth. Mouth feedings were, however, rapidly increased in amount and variety, and within two weeks after operation gastrostomy feedings were entirely discarded. Three weeks after operation the esophagoscope could be easily passed the entire length of the esophagus without encountering abnormalities. The patient was discharged with his wound healed.

Opportunities were afforded for follow-up examinations on this patient in October, 1928, and in February, 1929. On both occasions his condition was good. There was no dysphagia. The patient had regained his normal weight and strength and was engaged in hard work.

This case was first presented, with the permission of Dr. Donald Guthrie, Chief Surgeon of the Robert Packer Hospital, before the New York Society for Thoracic Surgery. It has never, heretofore, been published. So far as it has been possible to determine, from a study of the literature and from personal inquiries among those who have seen large series of esophageal cases, no previous record has been made of a similar condition.

370 West Church Street.

PATHOLOGIC PERFORATION OF THE GALL BLADDER

MARSHALL C. RUMBAUGH, M.D.
WILKES-BARRE, PA.

Perforation of the gall bladder is not common, and unusual cases warrant reporting. During July, 1928, two patients presenting almost identical abdominal symptoms were admitted to the Wilkes-Barre General Hospital and were operated upon by the author.

Case 1. L. H., aged 62 years, a carpenter, was admitted July 20, 1928. His chief complaint was abdominal pain, nausea, vomiting, and jaundice. He stated that after eating watermelon five days before admission he was seized with pain in the upper abdomen which he thought was acute indigestion. At first the pain was dull and the nausea persistent. On the second and third day he was somewhat relieved, but on the fourth day the pain returned with greater intensity, together with slight jaundice, and increased vomiting. Constipation had been present before and diarrhea during the attack.

The patient's countenance was that of suffering. His heart and lungs were normal, but in the upper right quadrant of the abdomen there was a visible, rounded, irregular mass, with marked tenderness and rigidity. Urinalysis was negative. The leukocyte count was 9,850.

Case 2. A. G., aged 49, a miner, was admitted July 29, 1928. His chief complaint was pain in the abdomen and persistent vomiting. The trouble had begun three days before with sudden pain in the abdomen, increasing in severity until his admission. A stabbing pain alternated with periods of a dull ache. For two days before admission the patient had vomited almost continuously. No history of influenza or any infection was obtainable.

The patient's countenance showed exhaustion and suffering. The heart and lungs were normal, but the abdomen presented rigidity of the upper right rectus muscle, with extreme tenderness, less marked on the left side. Urinalysis was negative, the leukocyte count was 17,850, and the Wassermann test was negative.

In both cases the operation performed was cholecystotomy with drainage. Free bile was found in the abdominal cavity. The omentum had made a feeble effort to wall off the infected area, but the pressure of the bile from the perforations had partially separated the adherent omentum from the gall bladder. In the first case it had formed a saclike compartment beneath the gall bladder. In both cases, numerous perforations were found, varying in size from one to ten millimeters in diameter. No stones were present. One of the perforations near the fundus was enlarged, and a rubber drainage tube was introduced and sutured in place. A similar tube was placed beneath the gall bladder, and a third tube was placed through a stab wound in the right flank, so as to drain beneath the liver.

Cultures made from the contents of both gall bladders revealed a pure colon bacillus infection. Both patients made an uneventful recovery, leaving the hospital in fifteen days. Both have remained well and have been working as usual.

Wilkes-Barre General Hospital.

PERIANAL URINARY FISTULA*

FRANCIS S. MAINZER, B.S., M.D.
CLEARFIELD, PA.

A man aged 59 came to the hospital because of urine draining through an opening lateral to the rectum. Two months previously he had developed a small abscess over the rectum. This was quite painful; hence he treated it locally. About six weeks after its onset, the abscess became so painful that he sought medical attention.

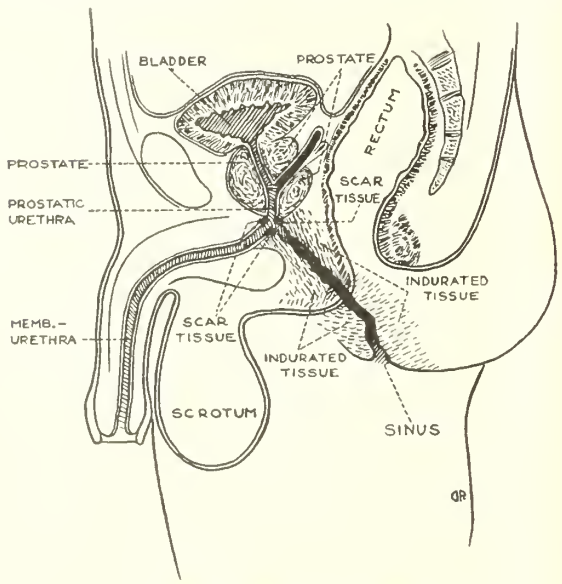

Fig. 1. Diagram Illustrating Fistulous Tract.

*From the Department of Surgery, Clinic of S. J. Waterworth, M.D., Clearfield, Pa.

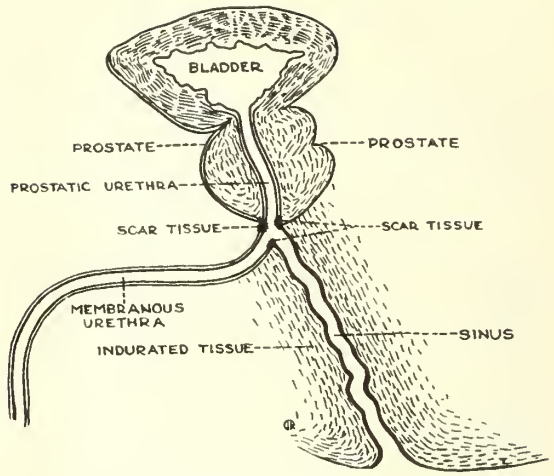

Fig. 2. Enlarged Diagram of Fistulous Tract.

The physician incised the abscess, allowing the pus to escape. The patient returned home feeling greatly relieved, but two days later he noticed urine coming through the wound. Therefore, he appeared at the hospital for further treatment.

Physical examination was negative except for a large indurated area lateral to the rectum which was very tender to the touch. It had the appearance of an abscess with an opening in the center from which drained a material that looked like pus. On admission, the temperature was 99.4° F., the pulse 82, and the respiration 22. The hemoglobin was estimated at 74 per cent, the erythrocytes numbered 3,880,000, leukocytes 12,400, polymorphonuclears 78, lymphocytes 17, large lymphocytes 3, and transitionals 2. The urea nitrogen was 19.15 mg., creatinin 1.6 mg., and carbon dioxid 28 volume per cent. The Kahn test was negative. Urinalysis showed the specific gravity to be 1.028, with acid reaction, a faint trace of albumin, and many white blood cells.

Operation was done under spinal anesthesia with 12 mg. of neocain. The urinary fistula was excised and the membranous urethra reconstructed. The fistulous tract was injected under pressure with Babcock's methylene blue. The incision, which circumscribed the fistulous tract, was made through the skin and carried down into the perineum, where it was found that the tract led down to the membranous urethra. At the junction of the membranous urethra there was much dense cicatricial tissue—so much that the urethra could not be recognized. A large catheter was passed through the penis towards the bladder, but would not pass the strictured area. The dissection of the sinus tract was carried out until it tore off at the prostatic urethra. The dye, which was found to have passed into the bladder, helped make it possible

to recognize the opening. The scar tissue was then dissected and excised, and a catheter was passed with no obstruction into the bladder. The prostatic and membranous urethra were sutured together over the catheter with chromic catgut sutures; the muscles and fascia in the neighborhood were then sutured to reinforce and to lessen the size of the wound; and the ends of the suture were left long and brought out through the perineum. A rubber drainage tube was threaded over the ends and passed down into the depth of the wound. The wound was packed lightly with iodoform gauze, so that the gauze did not reach within a half-inch of the urethra. A few sutures were placed in the skin, partially closing it over the packing, and the catheter was sutured through the glans penis.

The patient had a moderate postoperative reaction, the temperature reaching 101.4° F., but falling to normal in two days. The urine drained through the catheter following the operation. The bladder was irrigated twice a day with warm boric-acid solution, followed by instillation of a fluid ounce of a one-per-cent solution of mercurochrome. On the third day the packing was removed from the wound, and no odor of urine whatsoever was detected on the dressing. The wound was again packed lightly with iodoform gauze. Eight days after the operation, the packing and tube were removed. The edges were allowed to come together. Two days after the tube and packing were removed, the catheter was also taken out. At this time the patient had partial control of the bladder, but a good portion of the urine drained out through the wound. Therefore, a new catheter was inserted, which relieved the drainage through the wound. The

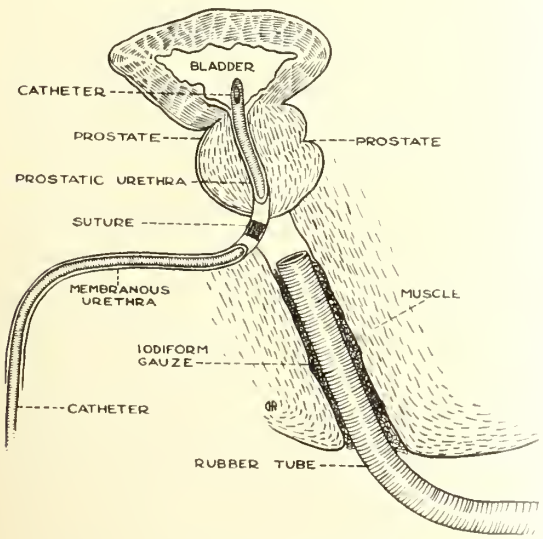

Fig. 3. Illustration of Operative Procedure.

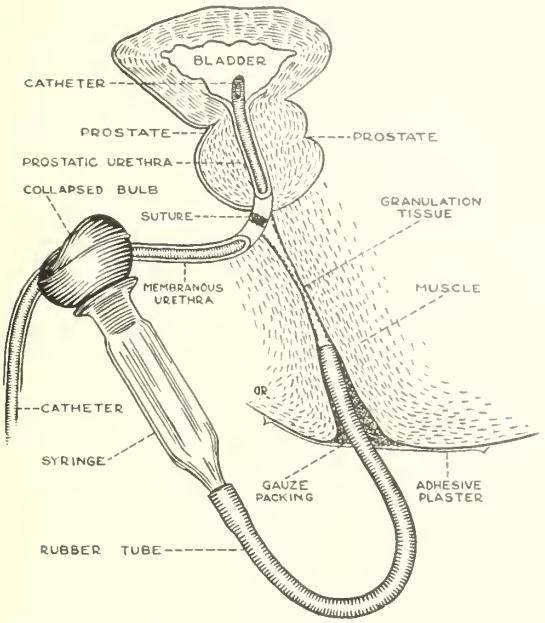

Fig. 4. Diagram Showing Postoperative Treatment.

wound was clean and healthy granulation tissue appeared throughout, but healing was slow.

Twenty days after the operation, it was decided to apply a form of suction to promote more rapid healing of the extensive wound. A tube was then placed in the wound with the edge of the inner portion about 5 cm. from the inner surface of the wound. The remainder of the wound was packed with iodoform gauze, with an outer dressing in order to make it air tight. At the outer end of the tube was placed a large Becton-Dickinson bulb syringe, the bulb of which was collapsed. This had a tendency to bring the edges of the wound into almost immediate contact. The patient coöperated very well. Each time the bulb became full, he was trained to remove, collapse, and replace it. Every second day the apparatus was changed, and it was surprising how quickly the edges approximated. From the time the suction apparatus was applied, no urine drained through the wound. On his discharge from the hospital the patient had complete control over the bladder sphincter.

A check-up examination six months later revealed entire healing of the wound.

207 East Cherry Street.

RUPTURE OF THE LIVER WITH SUBDIAPHRAGMATIC HEMORRHAGE

GEORGE BURTON STULL, M.D.
HARRISBURG, PA.

The patient, a schoolboy aged ten, was admitted to the Harrisburg Hospital on April 11,

1926, the day following an injury received by falling against a curbing from a roller coaster. He complained of an uneasy feeling and an indefinite pain in the upper right portion of the abdomen, occasionally extending to the right shoulder. He had vomited five or six times before admission.

His skin was very pale and moist, and he was quiet, drowsy, and thirsty. The conjunctiva and sclera were pale, the pupils small but reacting to light and accommodation. The lips and mucous membrane of the mouth were very pale, and the tongue was slightly coated. The superficial vessels of the abdomen were prominent, and there was moderate bulging along the epigastric region, with slight rigidity of the upper abdomen. Dullness extended from the costal margin to the fifth interspace on the right side and 3 cm. to the left of the midline. There was moderate peristalsis, and tympany on percussion of the remainder of the abdomen. The pulse was rapid and somewhat bounding, the temperature 98°, and the respiration rate 24. The urine contained .05 per cent of albumin and many hyaline casts, few leukocytes, and no erythrocytes, and was positive for indican.

BLOOD EXAMINATIONS

Date	*Erythrocytes*	*Leukocytes*	*Hemoglobin*
April 11	3,090,000	19,250	45
" 12	2,380,000	.....	40
" 13	2,400,000	.....	40+
" 14	3,010,000	.....	40+
" 15	3,160,000	.....	40+
" 16	2,940,000	.....	50
" 17	3,170,000	.....	60
" 20	3,200,000	.....	60

The temperature during this time was constant, and ranged from 100° to 103°.

A diagnosis was made of ruptured liver and subdiaphragmatic hemorrhage, and the patient was prepared for operation April 20th.

Under nitrous-oxid and ether anesthesia an upper right rectus incision was made. The liver was found to be displaced downwards and seemed to be much enlarged. There were plastic adhesions between the right lobe of the liver and the diaphragm and reflected peritoneum. These adhesions were broken up, and a large collection (approximately four liters) of dark, bloody fluid, bile-stained, was found walled off between the liver and the diaphragm. There was a laceration of the right lobe of the liver 5 cm. in length. The convex surface was mottled with plastic exudate, and the liver itself was enlarged. The gall bladder was thick-walled and distended. Two long rubber-tissue drains were placed above the liver, and one in the gall-bladder fossa.

For a period of two weeks following operation there was bile-stained bloody drainage. Hypodermoclysis was given, and the patient's reaction was very satisfactory. His temperature subsided, and was practically normal on the date of his discharge from the hospital on May 8th. The wound, except for a small drainage site, was entirely healed, and his general condition was good.

The patient has been seen frequently during the past three years. He is developing and gaining in weight normally. The wound shows no weakness. He complains of a feeling of fullness in the epigastrium following a heavy meal, but has no other symptoms.

Traumatic rupture of the liver, like rupture of the spleen, usually calls for immediate operation for the control of hemorrhage. In this case, had we operated earlier, we should have lost the only opportunity for a favorable outcome, as the boy was too desperately ill to stand any additional shock. As the blood examination showed daily improvement, we felt justified in waiting.

814 North Second Street.

GANGRENE OF AN UNDESCENDED TESTICLE FROM TORSION OF THE CORD

NELSON P. DAVIS, M.D.
PITTSBURGH, PA.

I have chosen this title because the condition I will describe is the only one of the kind I have ever seen. The state is one in which the testicle becomes gangrenous following a turning over of the testicle in the canal, producing torsion of the cord and cutting off of the circulation. The first case report was made by Delasiave in 1840. Since that time many case reports have been published.

Several theories have been mentioned as probable etiologic factors, the chief of which are as follows: first, persistence of the mesorchium; second, incomplete development and descent; third, bifurcation of the cord, as seen by Kocher in one case; fourth, a flattened state of the testicle and contraction of abdominal muscles; fifth, thrombosis of the veins of the pampiniform plexus; sixth, violent muscle exertion; seventh, manipulation by the patient or his physician.

The condition could be confused with strangulated hernia. As a matter of fact, this does not often happen since the history is that of undescended testicle, and no cramp, vomiting, or local tympany are present. The patient remarks that his testicle has always lived in the canal and that he has had pain and tenderness since his present trouble began.

The most satisfactory treatment is orchidec-

tomy. Attempts to save the testicle have been unsatisfactory, as a rule, because the circulation, damaged by the twist, often fails and the testicle atrophies or becomes gangrenous.

The patient was a sturdy male twenty-eight years of age, a laborer. He stated that he had never had a testicle in the right side of his scrotum. He could palpate the testicle in his inguinal canal. Three days before admission he had manipulated his testicle and canal violently in an attempt to deliver the testicle into the scrotum. This was followed immediately by aching pain which persisted and with tenderness that was disabling. A mass formed in the canal, and he consulted his physician, who sent him for observation. On admission, the right half of his scrotum was atrophied, or rather undeveloped, and contained no testicle. Pain and tenderness prevented introduction of an exploring finger into the external ring. A mass, of oval shape, and about the size of a split lemon occupied the canal. The mass was dull on percussion and light was not transmitted.

Upon opening the canal, under ether, a black and gangrenous testicle was found. The cord showed one complete twist. The tunica vaginalis testis was filled with dark bloody fluid. A small hernia sac containing the tip of the great omentum was present. The omentum was reduced and ligated, and the sac was excised high up. Orchidectomy followed double ligation of the cord high enough to avoid the twisted and edematous portion. Closure of the canal without drainage was followed by primary union and an uneventful recovery. The patient left the hospital fourteen days after operation.

The following facts may be of interest: Torsion may take place in the scrotum, in the canal, or in the abdominal cavity. In all torsion cases more or less congenital lack of development is present. Torsion in the abdomen may be complicated by adhesions between the testicle and the appendix, the intestine, or the great omentum. Forty-seven per cent of torsions occur in the canal or higher. A hernia accompanies sixteen per cent of torsion cases. In a fully descended testicle, torsion may resemble epididymitis. Torsion in the canal could be mistaken for strangulated hernia. Torsion may occur in infancy, and in such cases the testicle is nearly always in the scrotum. Two thirds of all torsions occur on the left side.

In the *Journal of Urology* for February, 1929, S. Wallenstein has an interesting article and a complete bibliography.

1405 Fifth Avenue.

DELIVERY BY LAPAROTOMY OF A SEVEN-MONTHS' LIVING CHILD TWO YEARS AND NINE MONTHS AFTER A SUBTOTAL HYSTERECTOMY AND RIGHT SALPINGO-OOPHORECTOMY

RAYMOND J. BOWER, M.D.
WILLIAMSPORT, PA.

Mrs. M. C., aged 27, was admitted to the Williamsport Hospital on February 20, 1929, complaining of abdominal discomfort, nausea, gas, inability of the bowels to move properly, faintness, and weakness. The day previous to admission she had been swimming. She stated that since November, 1928, she had noticed slight abdominal pains and some enlargement of the abdomen. She thought she was merely growing stouter. Up to the day of admission she had been doing her own work and had felt very well, although she had noticed some increased frequency of urination.

She gave a history of appendectomy at the age of 16 years, tonsillectomy in 1923, and in May, 1926, trachelorrhaphy with a supravaginal hysterectomy for a fibroid of the uterus and right salpingo-oöphorectomy. The patient had menstruated several times following this operation. She had one child aged eight years who was living and well.

Upon admission, a definite mass could be outlined in the abdomen. The temperature was 100° F., pulse 130, and respirations 28. Blood examination showed hemoglobin 60 per cent, red cells 3,260,000, leukocytes 19,000, polynuclear leukocytes 89 per cent, small lymphocytes 11 per cent, coagulation time, 3:30, and index 0.9.

Laparotomy was decided upon, and, after giving the patient about 800 c. c. of normal saline solution by hypodermoclysis, she was taken to the operating room. Under ethylene anesthesia a midline incision was made. On opening the peritoneum a ruptured placenta was found. Hemorrhage was very profuse, and after opening the sac which nature had formed about the bowels, a seven-months' living child was taken from the abdominal cavity. The placenta had made its attachment to the peritoneum of the large and small bowels and omentum principally, also to the bladder. The placenta was dissected from its attachments and a large amount of blood was removed from the peritoneal cavity. After hemostasis had been effected, quantities of normal saline solution were placed in the peritoneal cavity, drainage tube was inserted, and the

incision was closed. The patient's condition was such as to necessitate blood transfusion immediately and hypodermoclysis of normal saline solution, together with further stimulation. She made an uneventful recovery, and was discharged from the hospital on the nineteenth day with her wound completely healed, and her temperature, pulse, and respiration normal. She has remained well since.

The child lived and did very well on artificial feeding for two months and then died of septicemia, following an infection of the cervical glands.

Acording to correspondence with Dr. Morris Fishbein, editor of the *Journal of the American Medical Association,* dated March 6, 1929, this is the only recorded case of its kind in the literature in which a living child and mother were saved by laparotomy following previous supravaginal hysterectomy. In the other somewhat similar case, recorded in 1927 by W. Liepmann, a German, the patient died and laparotomy was not performed. In his case a posterior colpotomy was done for a hematoma of the abdominal cavity, later confirmed by postmortem examination. Pregnancy occurred two years after the supravaginal hysterectomy, and the fetus was about 1.5 cm. in length. Necropsy showed the pregnancy to have occurred within the greatly dilated tube. Liepmann also apparently attempted to find a similar case in the literature, but without success.

331 Pine Street.

School Physicians Assailed as Unfit

That inadequately trained physicians, teachers, and school administrators are holding up the progress of child-health service in the public schools of the country was claimed by speakers at the annual health conference of the American Child Health Association held in June. The delegates asserted that American universities and normal schools are not properly equipped to give adequate training in child-health work. "Except for a handful of workers throughout the country, few medical men are adequately trained in the necessary phases of this work," Dr. D. W. Gudakunst, director of school health service in Detroit, Michigan, declared. "School physicians should be taught sociology and educational methods. Few physicians are trained thoroughly in this field because intensive courses for school health work are not available in most institutions of higher learning. The graduates of these institutions are unable to understand how to teach the child to take care of itself. Perfunctory physical examinations that are the usual result fail to perform much service. They can determine only defects that are obvious, and although these are important, yet the doctors are unable to get the young boys or girls to care properly for themselves. School boards, in their gross ignorance, and principals who care little because they do not understand the importance of the health program, often request my department for nurses and doctors to help cure a sick child. We do not care to act as day nurses or turn our schools into clinics. Only where humane considerations move us do we respond to such calls."

The function of the well-trained physician in this field should combine that of teacher as well as doctor, according to the report of the secondary school section, delivered by Professor Edna Bailey of the University, of California, chairman. Such men would understand students and inculcate a proper health attitude, the report contended.

Prof. John M. Sundwall, of the University of Michigan Medical School, said: "Teaching medicine in the past has been primarily concerned with the study of diseased tissue, rather than the handling of human beings. Such an attitude has resulted in many important advances in medicine, but has neglected to take the proper cognizance of the work relative to the promotion of the health of the people. Other agencies have blazed the trail in this field. A new and important demand is being made of the medical profession and the medical profession is not equipped to meet this demand. The teaching of methods for making the proper health examinations will be the chief concern of the medical schools of the future. Medicine will soon adapt itself to this more or less sudden new interest."

Physicians Urged to Be Careful When Executing Medical Certificates on Civil Service Applications

(Statement of the United States Civil Service Commission)

The Government, and applicants for examinations themselves, are frequently embarrassed by the improper execution of medical certificates attached to applications for Federal civil service examinations.

New appointees are required to undergo a physical examination by a Government medical officer before entering upon duty. For many examinations a preliminary medical certificate is required in connection with the application for examination, for consideration in determining eligibility for examination, and in some cases for rating on the element of physical ability. Frequently, Government medical officers find in the examination at the time of appointment physical disqualifications which must have existed when the preliminary medical certificate was executed by the private practitioner, although no mention of such physical defects is found in the private practitioner's medical certificate. Such a situation presents a problem to the Government, especially if the appointee has traveled a considerable distance to accept the appointment. In many cases the appointment must be canceled, with resulting loss of time and money to the disappointed applicant.

The Civil Service Commission feels that these discrepancies between medical certificates executed by private practitioners and those made later by Government medical officers are due in some cases to carelessness upon the part of the private practitioners and in others to a liberal attitude deliberately assumed in the mistaken belief that by ignoring or minimizing physical defects the applicant is assisted in obtaining employment.

The Civil Service Commission's forms for medical certificates attached to application blanks are comprehensive and clear. If all private practitioners will exercise due care when filling out the certificates they will not only render a service to the Government but will also give the maximum service to the applicant who pays the fee for the preliminary physical examination.

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Editorials

THE ANNUAL SESSION

The seventy-ninth annual session of our State Society was held at Erie, the Gem City of the Lakes, from September 30th to October 3d. The only previous session at Erie was held in 1869. We desire to say in all due sincerity to our host, the Erie County Medical Society, that it was one of the very best sessions the members of the State Society were ever privileged to attend. The session was most interesting, beneficial, and enjoyable. There was a unanimity of opinion that the scientific program offered and the entertainment conducted will ever remain a beautiful memory in the mansion of memory of those in attendance. Too much praise and commendation cannot be meted out to our hosts. The thoroughness with which their plans were made and executed, and the graciousness with which their hospitality was extended are worthy of emulation. Their committees on arrangements are indeed to be congratulated. They merit unstinted praise.

Our members and their families visiting Erie were fascinated by the beautiful scenery en route, and by the historic city and its environs. Presque Isle State Park, a peninsula of 3,200 acres, is most inviting, and a drive along its attractive boulevard enchanting. There were many visitors to the *Niagara,* Perry's flagship at the Battle of Lake Erie, War of 1812, and the *Wolverine,* first iron U. S. warship.

Dr. William T. Sharpless, of West Chester, was installed as president, and Dr. Ross V. Patterson, dean, Jefferson Medical College, Philadelphia, the only nominee, was made president-elect. Dr. Thomas G. Simonton, the retiring president, was presented with a gavel, and duly felicitated upon his devotion to and accomplishments for the best interests of the State Society; upon his successful conduct for several years as chairman of the Committee on Scientific Work; upon his visitations to the component county medical societies; and, upon his intense interest in scientific and organized medicine. Dr. Walter F. Donaldson, the peer of secretaries of state medical societies, was reëlected. Dr. Frank C. Hammond of the First Councilor District, and Dr. Howard C. Frontz of the Sixth Councilor District, having completed their terms as Trustee and Councilor, as prescribed by the By-Laws, the existing vacancies were filled respectively by the election of Dr. George A. Knowles, Philadelphia, and Dr. Augustus S. Kech, Altoona.

The House of Delegates functioned in its customary efficient manner, aided by the very satisfactory coöperation of the several reference committees. The Board of Trustees transacted its business as usual, always with the best interests of the State Society uppermost in mind. At the reorganization meeting Dr. Harry W. Mitchell, Warren, and Dr. Edgar S. Buyers, Norristown, were respectively reëlected chairman and clerk.

The scientific meetings were largely attended, and grateful appreciation is extended to the several guest speakers for their participation.

The golf tournament on Monday, the first day of the session, was a very successful affair at the Kahkwa Club, followed by dinner to which the trustees and the officers of the State Society were invited as guests. On Tuesday evening a Fish Fry was given at Rainbow Gardens, Waldameer Park, a privately owned amusement project, considered one of the finest along the Great Lakes. It was a wonderful evening's entertainment. On Wednesday evening the alumni association dinners were held, which are always very happy reunions. The Public Meeting convened at 7.45 p. m., when an address was delivered by Dr. Arthur J. Cramp, of the American Medical Association, Chicago, on "Medicine and Public Health." A very attractive musical program was presented in connection with the meeting. The President's reception and ball, at 9.30 p. m., climaxed an enthusiastic entertainment program. This reception is an event always eagerly looked forward to, and is enjoyed to the fullest measure.

The scientific exhibit was unusually good and very instructive. This feature should be amplified, as each year it becomes increasingly appeal-

ing. The motion-picture program was well arranged and very attractive. This form of visualization of subjects is of such value that it will become the most interesting part of the exhibit program. The technical exhibit practically covers every branch of medical science and is well worthy of support by our members, as it brings to them the latest features of value properly belonging thereto.

As an added feature during the session, the Pennsylvania Health Department exhibited its motorized laboratories used in rural sections. The outfit consists of a rural health car, a milk laboratory car which shows in detail the equipment used in making tests to insure Pennsylvania citizens that milk of a standard quality is being sold, and a motor laboratory which exhibits the methods used in the testing of individual highway water supplies along the main and secondary roads throughout the State. The cars were open from 8 a. m. to 8 p. m. each day. The units were in charge of a personnel who explained the details to all visitors. Dr. Theodore B. Appel, State Secretary of Health, declared that Pennsylvania can point with pride to the service which this equipment represents. "Perhaps more than in any other state in the Union this phase of work has been emphasized in Pennsylvania. The work which is accomplished each year by these units, in addition to the laboratories operated by the Sanitary Water Board in stream-survey work, has been eminently satisfactory," Dr. Appel asserted.

The Woman's Auxiliary had a most satisfactory business session, and its members were loud in praise of the lavish entertainment prepared for them.

The Public Charities Association of Pennsylvania held a public luncheon meeting, which was largely attended. Appropriate addresses were delivered.

The registration was 785. The 1930 session will be held at Johnstown.

IS DENTITION PHYSIOLOGIC OR PATHOLOGIC, OR BOTH?

The question of whether dentition is a physiologic or a pathologic process, or both, was recently discussed pro and con by a physician on the one hand, and a dentist on the other, the former in an article by Baxter, published in the *West Virginia Medical Journal* in April, 1929, and the latter in an editorial appearing in the *Dental Cosmos* for August, 1929, without, of course, as is usual in such cases, any unanimity of opinion being reached on either side.

The editorial endeavors to explain in a scientific way the *modus operandi* of dentition, the ways in which reflex disturbances are caused thereby, and the reasons therefor, at the same time taking vigorous exception to Baxter's statement, "It is safe for every practitioner to assume that no acute illness of the infant is due to teething," he (Baxter) being willing to admit that a physician would be justified in ascribing any illness to teething only after every other possible cause for the symptoms had been eliminated. Perhaps the most important point in the argument advanced in the editorial is the statement that a pathologic process does not necessarily require "a bacterial hypothesis for its etiology," "physical stimulus," in the opinion of the editorial writer, claiming much more consideration as an etiologic factor in the production of reflex symptoms than the medical profession has been willing to accord it in the past, undue importance having been given to the pathogenic microbe as being the etiologic factor in the pathologic process.

While there is no doubt that physicians are too prone to place on dentition the blame for all kinds of illnesses when no tangible explanation can be found for them, it is equally true that many infants have these symptoms of illness only with the eruption of some or all of their teeth, and they promptly clear up when the teeth come through. Seeing that frequently in these cases no pathologic condition of the gums is apparent, the suggestion of "physical stimulus" as an explanation would seem tenable, but in any event, it would be very difficult to convince any parent, or for that matter the physician himself, that there was no relation between the dentition and the symptoms from which the patient was suffering.

We agree with the author of the editorial when he takes exception to the physician's suggestion that dentition be the last factor considered in trying to determine the etiology of any illness, but at the same time, we cannot agree with those physicians who, without considering any other possibilities or probabilities, conclude that dentition and dentition alone is responsible for the symptoms. There should be a "middle-of-the-road" way out of this controversy, and the suggestion in the editorial that a physician, or a dentist, as the case may be, be called in to see such cases, appeals to us very strongly. In other words, it would be far better if an infant suffering with an illness, the etiology of which was not apparent to the physician after careful physical examination, could be given the benefit of a careful local examination by a competent dentist before the blame for

the illness was placed exclusively on dentition, and before the infant had been allowed to suffer any considerable length of time for the want of an accurate diagnosis.

When it is remembered, quoting Morse, "that dentition is a process which begins *in utero* and is not completed until the eruption of the 'wisdom teeth,' which seldom occurs before the seventeenth year," it is nothing less than foolish "to attribute to dentition all sorts of symptoms and diseases which have no relation to dentition, except that they occur at the same time." Again quoting Morse, "it is a safe rule to follow not to think of dentition as a cause unless every other possible cause has been ruled out, and then to feel quite certain, not that the cause is dentition, but that it has not been found," which leads us still more strongly to approve the suggestion to consult a dentist in these cases, so that we may not err in ascribing the illness to dentition, nor permit the etiology to go undiagnosed, as Morse feels would be the case.

MEDICINE LABELS MUST BE TRUTHFUL

There has been much agitation as to the advertisements carried by the press, magazines, etc., in regard to purported cures by the use of proprietary remedies. Testimonials have been submitted even by physicians as to the curative powers of certain of these remedies. We cannot conceive for one moment that a reputable physician would furnish a testimonial for a proprietary remedy. On the other hand, such a testimonial carries weight with the reading public to a large extent. The readers do not stop to consider the authenticity of the advertisement text.

With the hope of having this fraud abolished, we have recommended upon several occasions that the question of fake medical advertisements should be considered a county medical society activity, to the extent of showing the newspapers and other publications in their respective counties the fallacy of accepting these advertisements for publication.

Very fortunately this question has been considered by the courts. A recent decision of the Federal Court requires all subject matter to be capable of proof. This decision affects the labeling "of all products that directly or indirectly claim curative value either externally or internally," and is a decision of far-reaching importance to manufacturers of all such products. The Department of Agriculture, Washington, states that the character of the labels on products coming under their purvue will hereafter be affected.

The opinion was handed down by the Circuit Court of Appeals for the ninth circuit. The import of the court's decision is that any statement as to the curative value, whether direct or indirect, must be proved. This is indeed a big point gained. In all probability the case will be remanded to the lower courts for another trial on its merits to determine whether the ingredients in the compound involved in the suit are capable of producing the cure claimed.

In the case at court, the proprietor did not make any direct statement in the label, on the wrapper, or in the accompanying circular, merely declaring "We have received many letters from physicians reporting." Statements were submitted from physicians, attesting to the accuracy of their testimonials, and the defense contended that this was a complete acquittal, whatever might be the character of the drug. It is very interesting that an attorney should use this argument in defense, when he cannot help but know that such testimonials are fraudulent. On the other hand, could he be accused of not coming into court with clean hands? These testimonials were submitted by physicians, testifying to the therapeutic value of the compound in question. Again, let us admonish physicians not to write testimonials.

The court, however, ruled that even though no direct statement is made on the label, on the wrapper, or in the circular by the proprietor or the shipper that the use of testimonials submitted by doctors, when the preparation is not effective, amounts to a violation of the Food and Drugs Act. This is a far-reaching and sweeping decision, for which the learned court is to be highly commended. The court states "If the drugs are worthless, the proprietors cannot escape responsibility by hiding behind the phrase, 'the doctors say.' "

According to the decision, officials of the government may declare a product misbranded, and prosecution may be instituted, if their own medical experts advise that there are sufficient grounds for the belief that the preparations will not effect the cures claimed for them.

The United States Department of Agriculture, under the law, has no control of advertising of cures, being confined entirely to the statement made on the label or wrapper or circular. The Smoot bill would give such authority to the Government, but there is much discussion as to whether this might ultimately mean a Government censorship of advertising. This would be ideal. In the past the Government has been powerless to interfere to prevent the public from being deceived in the purchase

of drugs of claimed efficiency which are of no curative value whatever.

This latest decision gives the Department of Agriculture a more extensive power to judge as to the value of drugs than heretofore has been its privilege. The issue now drawn definitely in the courts is whether a drug can produce the cure claimed.

PSYCHOLOGIST VERSUS PSYCHIATRIST

During the past few years the terms "psychologist" and "psychiatrist" have become quite conspicuous in the scientific world, as well as in lay usage. To the true scientist and man of letters the words cause no confusion. However, in the minds of the laity, some writers, and some would-be psychologists, the terms are very perplexing. This is exemplified by a letter coming under the scrutiny of the writer in which a definition of the two terms is asked. For the opportunity to see this letter and to quote the reply to it, the writer is indebted to a friend. The definition is inserted in this editorial, for it clarifies the two terms very satisfactorily.

"First, psychology is really a highly specialized branch of philosophy, and the psychologist tends to explain various types of human behavior largely through a study of mental mechanisms *per se*. His work begins and ends with this study, and he is not qualified either by training or by law to treat abnormal mental functioning when it exists, other than to help the individual understand his problems and suggest certain measures that might help him to a better social adjustment.

"Second, psychiatry is a highly specialized branch of medicine, and a psychiatrist must first of all be a trained and legally qualified physician. As such, he approaches the study of abnormal mental functioning, not from the standpoint of mental mechanism alone but understanding that the mind and body are not separate and distinct entities. He approaches his problem as he would any other medical or surgical condition; namely, by an investigation of the entire anatomic, physiologic, clinical, neurologic, and psychologic individual.

"A psychologist cannot be a psychiatrist. A psychiatrist can and should be a good psychologist."

JOTS AND TITTLES

Science and Research

That there are two types of the hydrogen atom was recently demonstrated before the American Chemical Society by a young German physicist, Dr. K. F. Bonhoeffer. In both types the nucleus of the atom is made up of two parts; in the one, the two parts rotate in the same direction, while in the other, they rotate in opposite directions.

Dr. J. S. Lundy of the Mayo Clinic and Dr. R. M. Isenberger, professor of pharmacology at the University of Kansas, report good results in over a thousand cases from the use of iso-amylethyl barbiturie acid as an anesthetic. Given by mouth before administration of a local anesthetic, it lessens the patient's apprehension. Injected intravenously it quiets the patient before operation and increases his comfort after operation by production of a semiconscious state for several hours. Nausea and vomiting are reduced or eliminated, and convulsions have not occurred in any case in which this anesthetic has been used.

Dr. Eugen Steinach, of the University of Vienna, has reported the isolation from glands in the brains of frogs of a substance to which he has given the name "centroncrvin." His statement is quoted as follows: "A stimulating substance which is found in the brain and has the effect, if injected into the circulatory system, of enlarging the spinal cord, accomplished an average increase of from 400 to 600 per cent in the speed of nervous reflexes, which, however, are not abnormally nor irregularly nor spasmodically carried out, but which remain within the limits of a general strengthening of the functions." Frogs treated with centronervin were able to catch 150 flies apiece per hour, while those in the control group caught only 79.

The latest development in the treatment of pernicious anemia is an extract from the dried, ground stomachs of hogs. This has recently been announced by Drs. Cyrus C. Sturgis and Raphael Isaacs, of the Simpson Memorial Institute for Medical Research of the University of Michigan, and Dr. Elwood A. Sharp, of the Department of Experimental Medicine of Parke, Davis and Company. It is claimed that an ounce of the hog-stomach extract is as effective as a pound of raw liver or three ounces of the most concentrated liver extract now made.

That the average number of physical defects decreases as the intelligence quotient increases, has recently been announced by the United States Public Health Service following studies on a group of school children in two counties of Illinois. This tendency seems to be independent of race, language, and other similar factors, though race, color, nativity, language used in the home, occupation of the father, and age and place of residence of the child all appear to bear some relation to the intelligence quotient. In view of the fact that the intelligence tests used in this study appear to be indicators of total mental equipment rather than "native" ability alone, the slight tendency for a higher intelligence quotient to be associated with better physical condition and development might be interpreted in several ways: (a) The handicap due to physical defects may result in slower mental development; (b) the children who are low in mental development may tend to come from families whose innate or constitutional physical characteristics are also below average; (c) the slower physical and mental developments may both be the result of other factors with which both are correlated, such as adverse conditions of various kinds. From the data at hand it is impossible to say which if any of these interpretations is correct, but it is possible that each of them may contain some truth.

A Chicago Hospital Experiment

A stock-holding corporation formed of Chicago physicians has recently announced plans for a chain of

five hospitals, with centralized buying, careful management, and reduction of overhead. Each institution will cost a million dollars, and will be staffed by a hundred physicians and surgeons, with a system of group nursing. It is planned to effect a saving of 33 per cent, and to care especially for patients of moderate means.

The Golf Tournament

Nosing out a field of 80 players with a score of 42-37-79, Dr. W. L. Thunhurst of Pittsburgh captured the championship of the State Medical Society, in the annual tournament at Erie, held over the Kahkwa Club course. Dr. Thunhurst finished three strokes ahead of Dr. George J. McKee of Pittsburgh, winner of the tournament a year ago. Dr. Paul B. Steele of Pittsburgh won low net honors with a card of 71, while runner-up honors went to Dr. S. G. Pontius of Lancaster. By reason of his splendid 79, Dr. Thunhurst became the possessor of the championship cup. Dr. McKee won a golf bag for his award, and in the handicap division a cup went to Dr. Steele, and Dr. Pontius was given three wooden clubs. Dr. G. E. Hayward, Meadville, received the prize of two clubs for the best nine-hole card, and Dr. John W. Croskey of Philadelphia was awarded a dozen golf balls for the best shot on the No. 3 hole. Dr. Hunter H. Turner of Pittsburgh, with a total of 130, was awarded the high-score prize of two clubs. The medical division team, consisting of Drs. E. B. Edie of Uniontown, Clifford C. Hartman of Pittsburgh, John J. Donahue of Shamokin, and T. P. Tredway of Erie, defeated a foursome from the surgical division for the annual title.

Medical Men of Franklin County

We wish to extend congratulations to the Medical Society of Franklin County upon its publication of the *Medical Men of Franklin County 1750-1925.* All credit is due Dr. Ambrose Watts Thrush, Chambersburg, the author of this stupendous undertaking, for the indefatigable work he has done to bring his endeavors to a successful fruition. The author states in the foreword that "it is very unfortunate that no record of the careers of some of the older physicians can be found in any available printed form, and that in the case of many others such information is so very meager." This is true in all sections, and we should suggest the compilation of similar data by the various county societies while the older living members can be helpful. It would be ideal if every county medical society would sponsor a similar publication, and have a committee that will annually gather material to be used for additional volumes. In this way a permanency of record would be assured. To the best of our knowledge, Fayette, Lycoming, and Franklin County Societies are the only ones which have issued a publication of this kind.

The first movement toward an organization of the medical profession in the county took place in 1825, the meeting being held at Chambersburg, at which time the name, "The Medical Society of Franklin County," was adopted, which title has continued without change to the present time.

The volume contains very interesting historical data. The biographical sketches of the medical men of the county are well worth while. Several served in the Revolutionary, Civil, Spanish-American, and World Wars. The following are abstracts of general interest:

Dr. Hugh Mercer, 1721-1777, was the first regularly educated physician to practice medicine within the present limits of the county, and during the Revolutionary War became a brigadier general, and was with Washington when he crossed the Delaware and on his retreat through New Jersey, and was mortally wounded at the Battle of Princeton, 1777. His body is buried in Philadelphia.

Dr. Benjamin Rush Senseny, 1843-1880, Chambersburg, had the first vaccine virus farm established in the United States. The virus was brought from Bogency farm in France. The army and navy were supplied with virus from this farm.

Dr. D. Hayes Agnew, 1818-1888, the eminent Philadelphia surgeon and teacher, though born in Lancaster County, upon his graduation in medicine, the following card appeared in the *Franklin Repository,* Chambersburg: "Dr. D. H. Agnew offers his professional services to all who may favor him with their calls. He may be found at Mr. Thomas McCausland's near the Greencastle and Mercersburg turnpike, midway between the two places. May 10, 1839." His stay in Franklin county was brief.

The following, all of whom are deceased, were born and most of them educated in Franklin County: Dr. William Thompson, for years Philadelphia's distinguished ophthalmologist, and one-time clinical professor of ophthalmology at Jefferson Medical College; Dr. John V. Shoemaker, one-time professor of therapeutics and materia medica in the Medico-Chirurgical College; Dr. I. Newton Snively, one-time dean of the School of Medicine of Temple University, and credited with having been the first physician in Philadelphia to administer diphtheria antitoxin; and Dr. Milton B. Hartzell, one-time professor of dermatology, University of Pennsylvania.

MEDICOLEGAL AND LEGISLATIVE NOTES

Raul Appeals to Superior Court.—Cyrus H. Raul, Philadelphia, was convicted on June 27, 1929, in Quarter Sessions Court, Philadelphia, of practicing medicine without a license. He applied for a new trial. On October 4, 1929, the motion for a new trial and an arrest of judgment was dismissed, and the defendant was sentenced by Judge Bouton to three months in the county prison and a fine of $500. On the same day an appeal was taken to the Superior Court, and bail was fixed in the sum of $3,000, which the defendant obtained, and he was therefore released from county prison.

Compensation for Disabled War-Veteran Employees.—The need of state legislation similar to the Canadian law which assumes responsibility for compensation for the disabled veteran during his employment as a handicapped worker was discussed by delegates attending the seventeenth annual convention of the International Association of Public Employment Services, United States and Canada, in Philadelphia on September 25th. Citing the Dominion law which enables placement of the physically disabled in positions for whose risk the employer is not responsible, Frank M. Mansfield, of Pottstown, urged the passage of such a law in Pennsylvania and other states where a similar clause has not been added to the state compensation act. "The steel and coal industries cripple more workers than any other industry," he declared. "Though their industrial leaders are willing to help place disabled men if they can, they constantly ask the same question, 'What are we going to do with the men

outside the industry when we cannot begin to care for those we ourselves have crippled?' If Pennsylvania had a law to meet this situation, these manufacturers would not fear to take the risk of employing men disabled outside their industry." Sixty-five per cent of the disabled workers placed in Ontario last year were veterans of the World War, H. C. Hudson, general superintendent of the Employment Service of Ontario, stated. "The wounded men who have been employed since the war are just beginning to break down. Young in years, they are old in body, and this is a situation we must work out very soon."

Syphilis and Divorce.—In an article on syphilis by Dr. Winfield Scott Pugh, in the August number of *American Medicine*, he discusses the very important phase, syphilis and divorce, and aptly states that the physician should be somewhat familiar with the law in his state upon this subject. Under the German civil code, syphilis is not of necessity a cause for divorce. Hellweg claims that it is a good cause of disunion if the disease has been acquired through adultery.

One naturally assumes that the courts should protect a woman who believes she is marrying a healthy man from the dangers constantly threatening her. An eminent legal authority has stated that he believes the decision of the court would have to be negative and the case dismissed where the husband who has had himself properly treated has not shown any symptoms for a number of years, the probability being that a cure had been accomplished. Of course this raises the issue too, is syphilis ever cured? Now and then a case is reported where undoubted reinfection has taken place.

Dr. Pugh states that "in no civil code in the United States does the word *venereal* appear," nor is there evidence, to his knowledge, of the mention of syphilis or a penalty for its transmission; when divorce is granted for syphilis, it is usually on the ground of cruelty. In a number of cases it was held that actual transmission of the disease alone constitutes cruelty, and divorce was obtained upon those grounds only. Great is the man's guilt in most courts where he has not allowed his wife proper treatment after her infection.

A married woman in one of our southern states on the Atlantic seaboard brought suit for divorce on the grounds of syphilis acquired from her husband. The court awarded her a divorce, on the grounds of "assault on her person," and in addition awarded damages. The judge stated in his charge to the jury that because a woman becomes married, it is not to be assumed that her body is to be assaulted with disease, by her husband, without redress. Many cases have been cited by physicians and others where the husband had innocently contracted the disease after marriage, and, the wife being duly advised, brought suit for divorce, the court refusing it, but a separation being effected. Physicians should be homemakers, and not homebreakers, and when both the husband and wife are infected, and either or both consults the physician, he should put forth every appeal to keep them together. Men physicians are much more prone to assume this attitude than women physicians. The latter should be more liberal, and bear in mind that it is of great concern both to the parties of the contract and to the state that the union be preserved.

To quote Dr. Pugh, "If syphilis is known to exist prior to marriage it is sufficient to annul any marital contract or affect a breach of promise suit. It would be most unwise, however, to contract syphilis as a means to this end." There may be mentioned apropos of this statement the case of a girl about thirty, a clerical employee of a hospital, who was engaged to a man, under treatment for active lues. The physician knew both families very well, and was stunned when he heard the announcement of the engagement. He explained the situation to the man, who gave the physician permission to discuss it with his fiancée, who replied that she would marry him syphilis or no syphilis, that it was no one's business but hers, and if she did contract the disease it was up to her. And so they were married. She contracted syphilis, left her husband, and brought suit for divorce, which was granted. An interesting phase of the question here is as to what action the court would have taken had the physician been called to testify as to the statement made by the woman when he attempted to show her why the engagement should be broken. It is of interest to note that several months after the divorce was granted the wife remarried.

In instituting proceedings for divorce, most attorneys omit the word *syphilis* and other venereal disease, unless it is the only possible grounds for action.

Fined for Selling Morphin Substitutes.—In Washington, D. C., a man was recently fined $200 and sentenced to six months in jail on each of two charges of violating the District pharmacy act, to which he had pleaded guilty. He sold to a man a concoction of quinin and borax when his customer asked for morphin, for which a charge was made of $180. The two charges upon which the prisoner was sentenced were: selling a drug without first being licensed as a pharmacist by the District Board of Pharmacy, and selling the compound without marking on the container the name of the drugs or compound therein.

Liability for Injury at School.—A pupil attending public school in Philadelphia was injured on the gymnasium floor by being thrown by another pupil. The question arose as to who would be liable for the physician's bill—the parents of the boy who threw the boy to the floor or the school board. The Philadelphia Board of Education advised that the parents of the injured boy would be liable for the medical services.

Patients Entitled to Free Treatment at State-Owned Hospitals.—The Department of Revenue, Commonwealth of Pennsylvania, was designated in an opinion delivered by Deputy Attorney General William A. Schnader on August 29, 1929, as the authority responsible for determining the patients entitled to free or part-pay treatment at State-owned medical and surgical hospitals. Exemptions shall be granted only in accordance with the facts of the case and the statute or rules controlling the situation. The opinion also specified that the Revenue Department has a right to take over the bookkeeping in institutions where this function is not attended to satisfactorily.

Actions Against the Rev. Dr. James Empringham.—The Attorney General's office of New York announced on August 15th that it was going to proceed against the Rev. Dr. James Empringham on charges of illegally operating a clinic in which patients were subjected to physical examinations. The charge will be practicing medicine without a license, and it will be based on complaints of doctors and clients that Dr. Empringham, although he held no license, operated an x-ray machine, gave advice on diet, and conducted examinations. The action must await return to New York State of Dr. Empringham. The case was placed in the hands of a deputy attorney general, acting for the State Board of Medical Examiners. Officials said the copy of the complaint against the clergyman would

be forwarded to Bishop Manning, of the Protestant Episcopal Diocese of New York, who, Health Department officials said, had been appealed to last year to unfrock Dr. Empringham. The latter was head of the Health Educational Society, which was closed by the Board of Health in 1928 after investigation of complaints that he was practicing medicine without a license. This organization was supplanted by the Emmanuel Institute, against which there were continued complaints.

A decision was also recently rendered by the New York Courts against Dr. Empringham and in favor of O. Boto Schellberg and the publishers of the *International Journal of Medicine and Surgery*, for infringement of patent rights and plagiarism. The plaintiffs claimed that the defendant had adopted the Schellberg system of colonic therapy, and that his literature was taken almost verbatim from articles on it which had been published in the *Journal*.

New York Public Welfare Law.—The Public Welfare Law which becomes effective in New York State January 1, 1930, provides that community officials shall furnish medical care as needed not only to completely destitute persons (as provided by the old law), but also to "persons otherwise able to maintain themselves who cannot secure necessary medical care." This care may be given in a dispensary, hospital, the patient's own home, or elsewhere. To facilitate home care of the sick, a town, city, or county is authorized to appoint a physician to care for patients in their own homes. If a physician is not appointed, the Public Welfare officials are authorized to employ physicians for this purpose.

PUBLIC HEALTH

Gorgas Memorial Institute at Washington, D. C., Observes 75th Anniversary of Birth of William Crawford Gorgas.—October 3d commemorated the 75th anniversary of the birthday of William Crawford Gorgas, physician, sanitarian, and army officer, who freed Havana and the Panama Canal zone of yellow fever.

The Gorgas Memorial Institute, with headquarters at 1331 G Street, N. W., Washington, D. C., founded to honor the name and achievements of Dr. Gorgas, announces that during the past year the twofold purpose of Gorgas, health education and research, has been carried forward in an active program which has benefited directly and indirectly the profession of which he was a member.

The program of health education has been accomplished through several mediums: the press, the speaking platform, the radio, and through high-school essay contests. Many physicians have aided in the performance of this great health task. Some have written health stories in terms of lay English, which have been released through the regular publicity channels of the Institute; some have assisted the Speakers' Bureau of the Gorgas headquarters in arranging opportunities for the caravan health speakers; some have written medical articles for radio release; and a few have been of material assistance in bringing the high-school essay contest, conducted during the past year, to the attention of the schools of their respective cities.

The research work of the Memorial has been given an added impetus through the gift by the government of Panama of a beautiful edifice which houses the laboratory in Panama. The 70th Congress of the United States made an annual appropriation of $50,000 for the maintenance of this laboratory, and Latin-American countries will contribute a pro-rata share on the basis of population to the support of this project. Dr. Herbert C. Clark, noted scientist, formerly of the United Fruit Company, assumed his duties as director of the laboratory on January 1st. A Consulting Board from each Latin-American country coöperating will be appointed by the respective governments to aid Dr. Clark in his work.

President Hoover is the Honorary President of the Institute and Vice-President Charles Curtis is a member of its Board. At the last annual meeting held in Boston, Rear Admiral Cary T. Grayson was elected the active president of the Institute, and Dr. Franklin Martin, president of the American College of Surgeons, was elected chairman of the Board. Dr. Bowman C. Crowell, of Chicago, was appointed chairman of the Scientific Board, which will direct the policies of the laboratory.

It is the duty and privilege of the medical and dental professions to coöperate, not only because of the ultimate benefit to these professions themselves, but because of the crying need of a campaign of this sort for the better personal health of our people everywhere.

Distribution of Endemic Goiter in the United States as Shown by Thyroid Surveys.—It has been deemed expedient to gather together the results of thyroid surveys made in the United States. The publication of such a list has a threefold object: it causes additional thyroid surveys to be undertaken, it stimulates reporting of the results of these surveys, and it furnishes needed information to students of the problem.

Prior to the World War, no information concerning the nation-wide distribution of goiter was available, for relatively few surveys had been made. In addition to assembling again the findings of the draft examinations, there are presented in the present article the results of thyroid surveys made in various sections of the United States. The evidence adduced by these independently conducted surveys among individuals of elementary schools, high schools, and colleges is largely confirmatory of the results of draft examinations. The chief difficulty in comparing goiter statistics in different sections of the country arises from the fact that the dividing line between the normal and enlarged thyroid gland is not definitely known. Consequently, a thyroid which is considered normal in a section having a considerable incidence of enlargements may be regarded, and often is recorded, as a definite enlargement in districts of slight prevalence. Another obvious defect in thyroid surveys made by independent workers results from the failure to employ similar methods of examination, as well as a common means of classifying the several degrees of goiter detected. These facts, when considered in connection with the varying skill and experience of the examiners, militate to a considerable extent against the usefulness of the data for purposes of comparison.

An interesting point which has been brought out by goiter surveys is the finding of the affection in places in which its presence has hitherto been unsuspected. In this connection, it should be pointed out that a thyroid survey is a time-consuming procedure, and is not to be undertaken to the exclusion and detriment of more important public-health projects. Frequently a thyroid survey can be made as a collateral adjunct to general physical examinations. When this policy is pursued, time is conserved, and at the same time correlations

between thyroid enlargements and other physical states are indicated.

Summary. (1) The distribution of goiter in the United States, as disclosed by numerous thyroid surveys, parallels, in general, the goiter findings among drafted men. (2) There are manifestly wide variations in the methods of determining thyroid enlargements. The classifications of various degrees and types of involvement also range within wide limits. Uniform procedure is a necessity if findings in different sections of the country are to be compared. (3) Based upon incidence, wholesale prophylaxis for endemic goiter is apparently not required in all States. (4) Individual thyroid surveys disclose foci of endemic goiter in localities not previously regarded as being located in goitrous territory. (5) Resurveys are desirable for the purpose of learning the extent and character of changes occurring either under natural conditions or after prophylaxis has been instituted.—*Public Health Report*, 1929.

Morbidity in Pennsylvania in August, 1929

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Aliquippa	0	0	3	0	17
Allentown	6	3	6	0	38
Altoona	0	0	8	0	21
Ambridge	0	0	2	0	3
Beaver Falls	1	0	0	0	2
Berwick	1	19	2	0	11
Bethlehem	3	7	14	1	14
Braddock	3	1	0	0	0
Bradford	0	4	0	0	0
Bristol	0	0	0	0	2
Butler	0	1	0	0	3
Canonsburg	0	0	0	0	0
Carbondale	10	0	0	0	0
Carlisle	0	0	0	0	0
Carnegie	1	1	0	1	5
Chambersburg	0	0	2	0	0
Charleroi	0	3	0	0	1
Chester	3	0	1	2	8
Coatesville	0	0	0	0	1
Columbia	1	1	0	0	0
Connellsville	1	0	0	0	0
Dickson City	0	0	0	1	1
Donora	0	0	0	1	1
Dubois	0	0	1	0	0
Dunmore	0	0	0	0	0
Duquesne	1	0	3	0	0
Easton	0	2	1	0	2
Erie	2	5	1	0	55
Farrell	1	2	0	0	2
Greensburg	0	0	1	0	0
Harrisburg	1	2	1	1	15
Hazleton	3	0	1	2	7
Homestead	0	0	9	0	0
Jeannette	0	0	0	1	0
Johnstown	2	1	4	1	31
Lancaster	1	4	2	1	66
Lebanon	0	2	0	1	2
McKeesport	0	1	3	0	4
McKees Rocks	0	5	2	0	1
Mahanoy City	0	0	0	0	1
Meadville	0	0	0	0	0
Monessen	12	2	2	0	9
Mount Carmel	0	0	0	0	0
Nanticoke	0	0	0	0	0
New Castle	1	0	0	1	6
New Kensington	0	0	1	0	0
Norristown	0	0	0	1	7
North Braddock	3	0	0	0	0
Oil City	0	1	1	0	11
Old Forge	0	0	0	0	0
Olyphant	0	0	0	0	0
Philadelphia	37	9	22	20	246
Phoenixville	0	0	0	0	3
Pittsburgh	20	14	21	7	143
Pittston	2	0	0	0	0
Plymouth	0	0	2	0	0
Pottstown	1	0	0	1	0
Pottsville	3	0	0	0	1
Punxsutawney	0	0	0	0	0
Reading	0	3	0	1	34
Scranton	4	1	1	3	13
Shamokin	1	0	0	0	0
Sharon	0	20	0	0	9
Shenandoah	8	0	1	0	0
Steelton	0	0	0	0	2
Sunbury	2	2	0	0	0
Swissvale	0	0	0	0	1
Tamaqua	0	10	1	0	3
Uniontown	0	0	1	2	22
Warren	0	0	1	0	2
Washington	1	0	2	0	6
West Chester	0	1	0	1	0
Wilkes-Barre	6	4	2	1	13
Wilkinsburg	0	0	1	1	2
Williamsport	4	4	1	0	30
York	0	1	0	0	9
Total Urban	146	136	127	52	886
Total Rural	146	162	179	111	789
Total State	292	298	306	163	1,675

HOSPITAL ACTIVITIES

Selection of Interns

The selection of interns is a problem that is increasingly causing much concern. There is no denying the fact that an undue number of interns do not manifest proper regard for their duties to the patient and to the hospital.

Seven states require that all applicants for licensure shall have served at least one year's internship in a hospital approved for internship by the state concerned. Too often the graduate feels that internship is a penalty inflicted upon him, failing to realize that it is a preparation for his life's work, and that it is a period of apprenticeship for which he should be most grateful.

Difficulty is experienced in selecting interns for many reasons.

(1) *Location of hospital.* The hospital may be located in a community that does not appeal to the applicant.

(2) *Staff.* There may be a sufficient number of the members of the staff who are not conversant with modern laboratory procedures and the use of up-to-date instruments of precision for diagnosis and treatment, who, too, may show no aptitude for daily instruction of interns when making rounds, and who have little or no desire to permit the intern to acquire manual dexterity in the use of diagnostic instruments or practice in surgical technic. Interns who desire to

learn, serving in an institution with a staff of this type, naturally will advise other applicants for internship to shun such an institution.

(3) *Salary.* Many applicants prefer an appointment to a hospital that will pay a salary and that supply their uniforms.

(4) *Time off.* A hospital which is not liberal in allowing interns recreation is looked upon with disdain by many applicants. Per contra, such an institution is to be commended, because an intern who is rendering efficient service to the hospital has but little time to seek hours off duty. Hospitals and interns, too, should bear in mind that certain state boards of medical examiners look with disfavor on hospitals that are liberal with off-duty permissions, on the assumption that the intern does not acquire the required amount of service demanded in a one-year assignment.

(5) *Examinations and interviews.* Examinations should be abolished. Applicants cannot be expected to pay expenses to travel to hospitals out of the community where they are in attendance on medical schools. The same applies when the hospital demands that the applicant appear for a personal interview. An interview affords only an opportunity to size up the applicant's personal appearance. It affords no information whatever as to his ability or willingness to render efficient service.

(6) *Delay in making the appointment.* Many hospitals select their interns upon the satisfactory completion of the junior year. In order to determine their adaptability, as many of the appointees as possible may be assigned as substitutes during the summer months between the junior and senior years of their academic work. The Board of Medical Education and Licensure of Pennsylvania prefers that appointments shall not be made before February of the senior year.

Owing to the great demand for interns, hospitals should make the service attractive, and afford proper housing facilities and food.

Cross Infection Reduced to Minimum in Special Hospitals.—The need for further attention to the possibilities of contagious disease and infection in general hospitals, is greater because periods of quarantine are being reduced by health officers, and this also necessitates greater care in examination of patients in general hospitals upon admission. It is a fact that toxin-antitoxin is not universally used, although its effectiveness has been definitely proved. There should be coöperation between general hospitals and health officers so that a program of education could be carried on and actual demonstrations of toxin-antitoxin be given. In this way the public would become familiar with this protection and many more immunizations could be accomplished. The hospital field offers opportunities for the promotion of health examinations. It is cheaper to prevent an illness than to cure one; and since hospital costs are steadily growing, sales methods for the prevention of illness and for the greater utilization of the facilities of hospitals are all the more valuable. The preventive phases of hospital service offer a splendid talking point, because through prevention the hospitals save the community taxation for the support of patients, and bequests for such work are all the more valuable.—*Hospital Management.*

Sweeping Reductions Made in Stocks of Used X-Ray Films, Hospitals Report.—Evidence of the concern that nonsafety films are giving hospital administrators was given at the MacEachern round table of the American Hospital Association convention, where so many questions were asked that many had to be left unanswered because of lack of time. A show of hands at this session indicated that more than a third of the hospitals represented had changed to safety film recently. A group of Boston hospital administrators, however, emphasized the fact that all of the larger hospitals of that city had been using safety film with complete satisfaction for about five years.

M. B. Hodgson, medical department, Eastman Kodak Company, introduced the subject of proper handling and storage of nonsafety film at this session with an illustrated talk featuring the film storage room of the Highland Hospital at Rochester, N. Y., which embodies all the recommendations of manufacturers and fire underwriters, including fireproof doors, a location on the roof, sprinklers, vents, etc. Mr. Hodgson indicated that an effort was being made in New York and Chicago to establish a collection service to remove old films from hospitals.

Some of the comments made during the discussion were: The use of safety film will have its effect on lowering the cost of fire insurance in hospitals. There is no need to keep films in New York State, from the standpoint of legal requirements, after six years. In answer to a question as to the value of water in extinguishing film fires, it was said that the films should be deluged with water. Safety film gives exactly the same images as nonsafety, said Mr. Hodgson, although it has a tendency to curl, and will crack easier than nonsafety film.

H. G. Ehret, safety director, factory and building inspection division of the Department of Industrial Relations of Ohio, sent *Hospital Management* a copy of the report by an industrial analytical chemist of tests on films from the Cleveland Clinic which were sent to Ohio State University by the Department. This indicates that film does not explode immediately, but requires from fifteen minutes to an hour, when it explodes with the generation of a great deal of gas.

D. J. Demorest, the chemist, in his report, said: "These films explode spontaneously at a temperature very slightly above the boiling temperature of water and do not need the aid of a spark or flame. While the immediate deaths in the hospital were undoubtedly due to carbon monoxid, I am strongly of the opinion that the numerous after-deaths were largely due to the coating of insoluble toxic tar, which must have coated the air passages of the lungs of those that breathed the gas."

Dr. W. H. Smith, Johns Hopkins Hospital, is among the many who have decided to change to safety film. "We have come to the conclusion that they (nonsafety films) present too great a hazard to be used in a large hospital where they must be used in considerable quantities," he said, "because we feel that without the storage of large quantities of these films within the buildings where they are easily accessible a great deal of their value is lost. We have decided to change to the acetate film. We use the same vault which we have formerly used for the storage of films. The vault is fireproof, 10 x 9 x 26 feet. At one end of the vault is a large vent, 4 x 8 feet, through to the roof. The vault is also equipped with a sprinkler system and an automatic fire door inside and a steel fire door on the outside. We have decided, furthermore, not to attempt to keep the films longer than six years, even though we use the acetate film, because in our judgment 90 to 95 per cent of the films, once interpreted and recorded on the history, are not referred to again."

Dr. C. S. Woods, superintendent, St. Luke's Hospital, Cleveland, says that following the disaster in the

Cleveland Clinic he transferred films to a building apart from the hospital "where they are to remain until the authorities instruct us concerning the permanent housing of them. Our buildings are new," he said, "and the requirements of the fire underwriters and building inspector have been met, in so far as we know, in every detail. Our storage room has the following features: The film storage room is located on the ground floor of the central building. It has but one door opening off the film viewing room. Therefore, it is not directly connected with the main corridor. The door to the film storage room is a fire door. The film storage room has an approved sprinkler system. The electric lights are controlled by a switch located in the film viewing room. The electric light bulbs in the film storage room are enclosed in glass cases. There are eighteen cabinets of fireproof construction housed in the film storage room, in which the films are stored. Each cabinet will accommodate approximately 3,000 films, and is divided into four separate compartments. Each compartment has a self-closing door. The compartments are designed so that there is a circulation of air about the films. Each cabinet has a vent which is connected to the main vent from the film storage room, which goes independent of any other ventilation system directly to the top of the chimney. In other words, the theory is that one cabinet might burn without injury to the other cabinets. All the work is done in the very best and approved manner which has been approved by all the various and customary authorities."

Colonel R. E. Longan, superintendent, Baltimore City Hospitals, sounded a warning against going to extremes because of the Cleveland disaster. "As usual, after a catastrophe like that in Cleveland," he pointed out, "we do a lot of things in an excited frame of mind, and seldom do the thing we ought to do. We are very easily stampeded. I have no doubt that a great deal of unnecessary expending will be done, and, after all, safety will not be provided. Personally, it seems to me that the use of safety films offers the best security, even though they cost more at the present time. It is very possible that if everybody used safety films exclusively the price could soon be reduced. If the old type of films is to be used, the usual safety precautions for any highly inflammable material should be taken, which would include a satisfactory exhaust for gases."

The regulations of the National Board of Fire Underwriters cover all subjects which might cause a disaster, and every superintendent should familiarize himself with them, as he cannot excuse himself or evade responsibility for the flagrant violation of these regulations.—*Hospital Management.*

A Successful Group-Nursing Plan.—For the success of group nursing in the hospital, the nurse personnel should be carefully chosen, M. Della DeLong, Grace Hospital, Detroit, pointed out in a paper that was read at the American Hospital Association meeting in Atlantic City, on Grace Hospital's successful two-years' experience in group nursing.

Nurses are engaged at a monthly salary, with meals only, for an eight-hour schedule. Three nurses, therefore, are required for twenty-four hours for a group of two or three patients. An additional allowance is given the nurse for room and laundry outside the hospital, but the nurses' home is preferable if facilities permit. The various groups are classified. With the discharge of a full group of patients, the same nurse group is automatically discontinued until a new assignment, at which time the nurses are again called for duty.

The group-nursing scheme at Grace Hospital has in no way detracted from the work of the special nurses engaged in private duty, according to Miss DeLong. Because only patients who cannot afford the special-nurse fee take advantage of the group-nursing service, the two types of nursing service in no way conflict, it was emphasized.

Charge for medical and surgical group nursing is $5 a day for a twelve-hour service and $7.50 for twenty-four-hour continuous nursing. Obstetrical nursing, with an assignment of two patients for each group, is $6 for twelve hours and $9 for twenty-four hours.

Group nursing, Miss DeLong emphasized, enables the hospital to furnish special nursing service within the means of the salaried individual and it ensures continuity of special-nurse service for many patients whose welfare demands individual attention.—*Modern Hospital.*

PHYSICAL THERAPY

An Appeal to Those Interested in Physical Therapy. Physical therapy will undoubtedly claim the increasing interest of the medical profession in the next few years. To those who are familiar with the results that can be accomplished, this observation is quite obvious. The important point to remember, however, is that, when arousing the interest of the medical profession in an unfamiliar subject, facts must be demonstrated in a scientific manner.

Physical therapy is new to most of our medical men, principally because it is not included in the curriculum or has not been properly taught in our medical schools. Physical therapy, unfortunately, has been adopted by some of the cults, and it is therefore regarded with a certain amount of distrust by the ethical practitioner.

The writer, after showing a physician through a well-equipped physical-therapy department and describing the effects produced by various apparatus, was asked naively, "Well, after all, are not most of the effects purely psychic?" The physician's thought evidently was that, since he had never been taught this method of medical treatment, it must therefore be of little practical value. It is this attitude of distrust and misunderstanding that must be dispelled if physical therapy is to be placed on its proper plane as an integral part of regular medical practice. This can be done only if those medical men who are competent physical therapists will present the facts in a systematic manner. Because of this attitude of skepticism, papers published by the physical therapist should be more complete and scientific than is ordinarily the case.

At the present time, there is an abundance of literature on physical therapy. There are numerous journals devoted to the subject, as well as many textbooks. With a few exceptions, however, these publications have had too little scientific basis. They have been grounded too much on empiricism and not enough on scientific facts.

The writer has just received a paper on physical therapy which was submitted with the thought that it might be published. In this paper, there are many statements which would startle the uninitiated physician, but which the physician trained in physical therapeutics would recognize as probably quite true. Throughout this paper there was not one reference to substantiate the statements; there were no statistics, there was no mention of controlled comparative studies, and there was no bibliography.

Until these faults, so common to many writers on physical therapy, are corrected, the conservative, thinking physician will not give the subject its merited recognition as a great adjunct to medical and surgical treatment, as practiced by reputable physicians.

The following very practical editorial appears in the *British Journal of Actinotherapy and Physiotherapy*, and it is submitted to our readers for their careful consideration:

"SUNLIGHT LAMPS" IN THE HOME

The province of a medical journal is to deal with the maintenance of health and the treatment of disease from the strictly medical point of view. Public opinion concerning one or other form of treatment does not come within its scope except so far as this is likely to influence the mental attitude of the individual patient regarding any particular treatment. On the other hand, pressure of circumstances, a plethora of divergent advice, and a real feeling of doubt on the part of many practitioners may sometimes necessitate a medical journal entering into what is practically a matter of public controversy.

Such an occasion has arisen with regard to the use of "artificial sunlight" in the home. A vast amount of confusion exists regarding what is permissible or not in this matter. Many trading firms which deal mainly with the medical profession are naturally anxious not to forfeit the profession's regard by going counter to its wishes in this matter. Many doctors are in doubt about the usefulness or danger of the growing popularity of "sunlight" lamps in the home, and the general public are bewildered by statements which are, or appear to them to be, diametrically opposed. Many of these sections are therefore looking to this journal, as a leading authority on the subject, for a definite pronouncement.

Taking a negative attitude first, we state with all possible emphasis a principle which must govern every medical journal: that the treatment of disease or disease conditions is a matter for medical men, and should never, in any circumstances or by any means, be attempted by a general public. Universal agreement must naturally follow with regard to the corollary to that statement—that ultraviolet lamps designed for the treatment of disease or disease conditions should never be used by the general public in an attempt to carry out such treatment. The sole exception to this is the case where, for some adequate reason, a medical man prescribes the use of such a lamp for use in a particular patient's home, having previously given precise instructions regarding what to do—and more particularly what not to do. This is comparable to a doctor leaving a dangerous drug in his patient's hands for use "as directed," and the same strict attention to the doctor's warnings regarding the danger of experimenting with it must be observed. We feel that a reputable electromedical firm would be justified in selling a clinical ultraviolet lamp to a member of the public equipped with an appropriate prescription. But these are the only circumstances which would justify such a course.

The foregoing refers to ultraviolet lamps which produce a high intensity and wide range of the radiations used in medical treatment, without reference to the solar spectrum.

The medical profession could not—even in the very unlikely event that it wished to—prohibit the general public from taking whatever advantage it cared of the sunlight which nature has provided for the benefit of the world. There is a deeply rooted feeling that what is natural is good, and that sunlight, being the most natural thing possible, is a thing of benefit and not of harm. In certain circumstances sunlight itself may be and is seriously dangerous, but from time immemorial man has been finding these things out for himself, and although a period of strong sunlight hardly ever passes without some one neglecting the customary precautions and doing himself harm, the general instinct dictates a prudence in the use of sunlight which is on the whole satisfactory.

If natural sunlight, used with reasonable precautions, is free and beneficial, the question arises as to whether artificially produced sunlight should not be equally at the disposal of the general public. No one has yet devised an apparatus which will precisely reproduce the various health-giving qualities loosely grouped together under the term "sunlight." These include exposure of the skin to moving air, breathing of fresh air, and usually bodily exercise as well. Further, the relative intensity of different portions of the spectrum in natural sunlight is not duplicated in any artificial light source. It is obvious, therefore, that the analogy between sunlight and "artificial sunlight" must not be pushed too far.

But there seems to us no adequate reason why the use of ultraviolet lamps which produce only a radiation of mild intensity, and emit no wave lengths shorter than those found in the solar spectrum, should be denied to the general public in conjunction with suitable precautions. We cannot advocate the wholesale use of such lamps unless we are satisfied that they are not to be used in substitutions for natural sunlight and outdoor exercise, but we are faced with the fact that a certain section of the public insists on having lamps of this sort. We, therefore, indicate hereunder the conditions which, in our opinion, should govern their sale and use.

It must not be taken that these conditions are final. They may very possibly have to be modified in the light of increasing knowledge, but they indicate a safe middle course and represent the greatest possible measure of agreement that can at present be secured among recognized authorities.

Every ultraviolet-producing lamp sold to the general public should conform to two conditions: first, it should emit no appreciable quantity of wave lengths shorter than 2,900 A.U.; second, it should be accompanied by printed instructions giving precise particulars regarding time of exposure and distance from the lamp. These should be compiled by a recognized medical authority, and should contain a serious warning against exceeding the indicated dosage, decreasing the distance, or using the lamp when in obvious ill health or for the treatment of any disease or disease condition.

The first condition may be satisfied by the composition of the electrodes, or by the use of a suitable screen, which should be so fixed as to be not readily detachable.

For the protection of the public, we in this journal are prepared to receive lamps of this nature for examination, and to issue in respect of such types as meet the approval of our technical and professional advisers a "safety certificate," which will satisfy purchasers that the lamps in question are reasonably safe for use according to the instructions which accompany them. These latter we are prepared to compile on the authority of this journal. They would include such directions regarding dosage as would warn users away from the temptation to think that, if ten minutes' exposure is good, twenty minutes' exposure must be twice as good; as well as from the temptation to experiment on themselves or their friends in ill health.

Since certain types of persons, and persons in certain states of health, react much more strongly than others, it would be necessary in the instructions to touch on the question of such idiosyncrasies, as well as to warn

users that too frequent exposure leads to slowing down of response and consequent loss of tonic stimulus.

Such a procedure as we have outlined does not mean that accidents will never occur. "Gegen Dummheit kämpfen die Götter selbst vergebens." But used under the conditions we have outlined, we feel that little harm is likely to accrue—probably not more than comes from the fact that such therapeutic agents as aspirin and Turkish baths are freely at the public's disposal. What positive benefit will accrue to the users of such lamps is not so certain, though there are those who think that any method of supplementing, to however a small degree, the lack of sunlight in the darker months of the year is to be welcomed. It is at least possible that the public use in moderation of "certificated" ultraviolet lamps may lead to a greater appreciation of the benefit of sunlight and fresh air, on the one hand; and on the other, to a desire for the known benefits of ultraviolet irradiation in medical hands being made available to them in the case of illness, which would be a considerable encouragement to all those medical men who have taken the trouble to study and practice such treatment.

INDUSTRIAL MEDICINE

Industrial Accidents and Compensation Costs.—The concerted drive for safety in industry is beginning to show results in accident reduction. The April total of accidents (in Pennsylvania) was 8.4 per cent less than the total for March, 1929. During April, reports of 152 fatal accidents and 12,593 nonfatal accidents were received at the Bureau of Workmen's Compensation, as compared with 197 fatal and 13,712 nonfatal accidents reported during March, or reductions in accidents for April of 22.8 per cent in fatal accidents and 8.2 per cent in nonfatal accidents. This is the first substantial reduction in accidents recorded thus far in 1929, and it is expected that April has marked the turning point of the accident curve for 1929, and that each succeeding month in the year will show a smaller total of accidents than its predecessor. It is indeed necessary that accident reductions be shown for a number of successive months in 1929, if the state-wide safety campaign is to achieve its ultimate goal of a substantial reduction in accidents for 1929.

Thus far this year, the accident record does not compare altogether favorably with the accident experience for the first four months of 1928. During the first four months of 1929, 653 fatal accidents and 52,089 nonfatal accidents have been reported to the Department, as compared with 591 fatal and 47,354 nonfatal accidents during the first four months last year, or increases in 1929 of 62, or 10.5 per cent, in fatal accidents and 4,735, or 10 per cent, in nonfatal accidents.

The first third of the year has ended with both fatal and nonfatal accidents showing a 10-per-cent increase over last year. The transportation and public-utility industry was the only one of the three main groups of industry to show reduced accident totals. The increase in accidents for the general industrial group, with which the Department of Labor and Industry is particularly concerned, is in proportion to, and largely the result of increased exposure to accidents. The machinery for the satisfactory measurement of accident exposure from a state-wide and industry-wide viewpoint is not available, so that it is impossible to determine whether the increase of accidents is entirely attributable to increased exposure or not. However, the best available employment records show that the present volume of employment, in most manufacturing lines at least, is approximately 5 per cent greater than at this time last year, and payrolls are nearly 10 per cent larger.

The large increase in coal-mining fatalities for the first four months of 1929 in comparison to last year is due to the inclusion of the figures for the Valley Camp Coal Company mine disaster during March, in which 46 lives were lost.

The 152 fatal accidents reported during April were distributed industrially as follows: construction and contracting 12; manufacturing 38, of which 25 occurred in the metal industries; anthracite coal mining 36; bituminous coal mining 31; transportation 8, of which 7 occurred on railroads; public utilities 1; quarries 5; retail and wholesale trade 7; State and municipal 11; and miscellaneous 3. Nearly all classes of industry in the general industry group show increases in fatalities over last month. The manufacturing and construction industries each show an increase of 4 fatalities over last month, and the trading and State and municipal groups show a gain of 3 each. All other groups show decreases in fatal accidents except the quarry industry, which reported 5 fatalities in April, or the same number as in March.

An analysis of causes of deaths by accident in industry during April shows that 46, or 30.3 per cent of the total number of workers killed, lost their lives through injuries caused by falling objects. Thirty-eight of the 46 fatal injuries attributed to falling objects were due to fall of top or face in coal mines, 20 in anthracite and 18 in bituminous mines. The other 8 deaths due to falling objects were reported from the following industries: building construction 1, metal manufacturing 3, quarries 2, and retail trade 2.

Cars and engines with 27, or 17.8 per cent of the total, was the second highest cause of death in industry during April. Of the 27 workers killed by cars and engines during April, 7 were employed in manufacturing industries, 11 in coal mines, 1 in a quarry, 6 on steam railroads, 1 by an express company, and 1 was a municipal employee. The 27 persons who were killed by cars and engines were injured in the following manner: Collisions of trains 1; caught between cars 5; by derailments 3; falls from cars in motion, while getting on or off or standing or walking on, 6; derailing car 1; and run over or struck by train, while crossing, walking on, or working on or near tracks, 11. In addition to these, two workers were killed by collisions of motor vehicles and trains, but these are considered as motor-vehicular accidents.

Falls killed 19 workers during April. This cause ranked third highest and was charged with 19 deaths, or 12.5 per cent of the total. Five in the construction industry were killed by falls; 6 in manufacturing plants; anthracite mines, quarries, railroads, and public utilities, 1 each; State and municipal 2, and miscellaneous industries 2. Three were killed from falls caused by slipping on floors or sidewalks, 3 by collapse of platforms, 2 from ladders, 2 from scaffolds, 2 from stumbling over objects, and seven were killed by falls from a variety of other elevations, such as chutes, machines, vehicles, cranes, stairs, and other floor openings.

These three causes—falling objects, cars and engines, and falls of persons—were responsible for slightly more than 60 per cent of the 152 fatalities reported during April. Other cause groups showing 3 or more fatalities for April were explosive substances 13, motor vehicles 11, cranes and derricks 7, hot and corrosive substances 6, miscellaneous 6, electricity and cranes and derricks 4 each, and handling objects 3. The causes showing increases in fatal accidents over March were

cranes and derricks, electricity, hot and corrosive substances, falling objects, and falls of persons, the last-named group showing the largest increase—from 14 in March to 19 in April.

Compensation agreements were approved in 8,807 cases during April, involving payments to injured workers or their dependents in the amount of $1,789,498. The total amount of compensation awarded during the first four months of 1929 was $5,615,898, as compared with $4,531,756 for the corresponding period in 1928, an increase this year of more than a million dollars, or exactly 23.9 per cent. Receipts filed with the Bureau of Workmen's Compensation show that actual compensation payments for the first four months of 1929 are $862,984, or 22.9 per cent in excess of payments for the same period in 1928.—*Labor and Industry.*

THE CLINICAL CONGRESS OF THE AMERICAN COLLEGE OF SURGEONS

The Nineteenth Clinical Congress of the American College of Surgeons was held at Chicago, Ill., October 14th to 18th.

At this year's Congress special attention was devoted to the demonstration of modern methods in the treatment of fractures. Dr. Charles L. Scudder, chairman of the Committee on the Treatment of Fractures, submitted a detailed report of a trip made through the western states in the spring of 1929, carrying into the various sections the all-important message of the treatment of fractures. Dr. Scudder states that, as to the present method of treating fractures, it may be said that information regarding fracture treatment is noticeably lacking in uniformity. The generally accepted bases for treatment are not always recognized. As a result, experimental forms of treatment are duplicated to the detriment of both patients and physicians. The inadequate and obsolete treatment of certain fractures of the long bones with skin traction produced by the gradually added increased weight is frequently being used. Dissemination of correct information through the local regional committees will discontinue this inefficient plan of treatment.

In his address, Dr. Glenn Frank, president of the University of Wisconsin, stated that unless the medical profession by its own initiative and successful issue educates the public to a program of disease prevention, insurance companies, industrial concerns, and even the state may take over the control of health. Dr. Frank stated further that statistics showed the economic loss caused by preventable sickness and postponable death amounted to 350,000,000 days, or $1,800,000,000 annually. It is estimated that by cutting this loss, a balance exceeding $1,000,000,000 could be left in the pockets of the working population and the industries over and above the costs of prevention. The physician must realize the necessity for advising his patients what to do to keep well, or state medicine will come into action and eliminate the selfish doctor.

Leaders in industry, education, and labor, together with representatives of indemnity companies, surgeons, and hospital administrators, were invited to attend the Congress and contribute to a conference on traumatic surgery.

The chairman of the Committee on Traumatic Surgery reported on the work of the committee in recent years and outlined the future activities in this highly important part of the work of the College.

The keynote of this year's annual hospital conference was "better care of the patient." A practical demonstration of a model staff conference was conducted by one of the local hospitals.

Statistical evidence of the improvement in hospital facilities and results was presented in a report on hospital standardization. With the report, Dr. Franklin H. Martin, president of the Association, announced a list of approximately 2,000 hospitals in the United States and Canada which have been found to measure up to the College's requirements for safe and efficient hospitals.

The hospital report, which represents one of the chief functions of the College, reveals that 95 per cent of the hospitals of 100 beds or over now measure up to the standards required by the Association. About 65 per cent of the 50- to 100-bed institutions are on the approved list, and 20 per cent of those with less than 50 beds. All government hospitals meet the requirements.

"The average 'production' of a hospital bed is now at the rate of almost three patients monthly," said Dr. Malcolm T. MacEachern, associate director of the College, who presented the report. "The stay of most hospital patients ranges from 8 to 15 days, with an average of 12.5 days. Ten years ago it was generally double that. The mortality rate in hospitals, now averaging 3.5 per cent, has also been cut in two in the past decade. Other evidences of hospital improvements are seen in the lessening of occurrences of infections and complications, an increase in the number of consultations, and advancement of clinical research."

Hospital standardization, with the annual publication of the approved list for the guidance and benefit of the public, was begun by the American College of Surgeons twelve years ago. Among other improvements there has resulted a reduction in fee-splitting by doctors, a practice vigorously combated by the College. The requirements for hospitals are: (1) A modern physical plant, free from hazards, with a competent governing body. (2) An efficient chief executive officer or superintendent with a competent personnel. (3) An organized medical staff of qualified physicians and surgeons who hold regular meetings to review and evaluate the professional work of the hospital. (4) A thorough system for recording condition, treatment, and progress of each patient. (5) Acceptable diagnostic and therapeutic facilities. (6) Definite evidence that the staff members are opposed to fee-splitting or payment of commissions by surgeons for patients referred to them.

The degree of Fellow of the American College of Surgeons was conferred upon a class of 652 at the annual convocation. The following Pennsylvania doctors were admitted to fellowship: Charles A. Behney, Bernard Bernstine, Frederick A. Bothe, James Norman Coombs, J. Hiland Dewey, Matthew Shayne Ersner, Paul Newton, K. Jepson, George E. Johnson, Robert A. Kimbrough, Jr., Francis J. McCullough, Charles Scott Miller, Thaddeus L. Montgomery, Abraham M. Rechtman, Lewis C. Sheffey, Emily Lois Van Loon, Morris Weinstein, Emily G. Whitten Auge, and V. W. Murray Wright, all of Philadelphia; Harry W. Bernhardy, Rochester; Ethan A. Campbell, Chester; Norman Ross Crumrine, Beaver; Leon Calvin Darrah, Reading; William Early Dodd, Rossiter; William Tyler Douglass, Harrisburg; Ford Eastman, Erie; William A. Finady and Loyal A. Shoudy, Bethlehem; Nida Troy Gillette, Corry; Griffith S. Lawall, Allentown; W. Blair Mosser, Kane; and Michael J. Noone, Scranton.

Surgeon General Merritte W. Ireland, U. S. A., Washington, D. C., was installed as president, and Dr. C. Jeff Miller, New Orleans, was chosen president-elect. Philadelphia was selected as the meeting place for the 1930 Congress.

TUBERCULOSIS ABSTRACTS

A Review for Physicians

PREPARED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Published through the coöperation of the Pennsylvania Tuberculosis Society and the Medical Society of the State of Pennsylvania

THE importance of recognizing tuberculosis in its incipiency is repeatedly and deservedly emphasized. The alert physician, when he suspects the disease, makes careful search for lesions in the apex of the lung. The supposition is that the tuberculous process begins usually in the apex, from which focus it tends to spread downward to the lung generally. Several clinicians have recently called attention to a form of tuberculosis which begins in the infra-apical region and which spreads rapidly from there to other parts of the lung, including the apex. Max Pinner, of the William H. Maybury Sanatorium, Detroit, has studied this type of lesion in 200 cases and presents his conclusions in this number of TUBERCULOSIS ABSTRACTS, a more complete discussion of which appeared in the *American Review of Tuberculosis,* February, 1929.

Acute Subapical Tuberculosis

Wessler, some years ago, pointed out in this country the frequency of the early appearance of a subapical infiltrative process, the gravity of which, as regards progressive disease, was quite clearly shown. More recently, certain German workers, notably Assman, Redeker, Romberg and Ulrici, have pointed out that much of the tuberculosis seen in adults is the result of a bronchogenic reinfection, either endogenous or exogenous, with a small tuberculous bronchopneumonic focus located anywhere in the lung, but most frequently in the infraclavicular region. This type of the disease comes on suddenly with symptoms that are grippelike or catarrhal. Variations of this

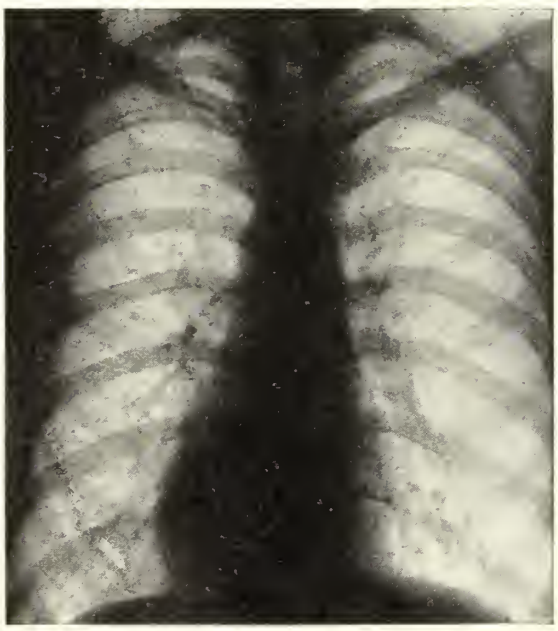


Fig. 1. This roentgenogram was obtained at a routine examination of employees. The patient at this time was in perfect health, and the roentgenogram does not show any evidence of tuberculous involvement of the lung, and in particular no apical foci.

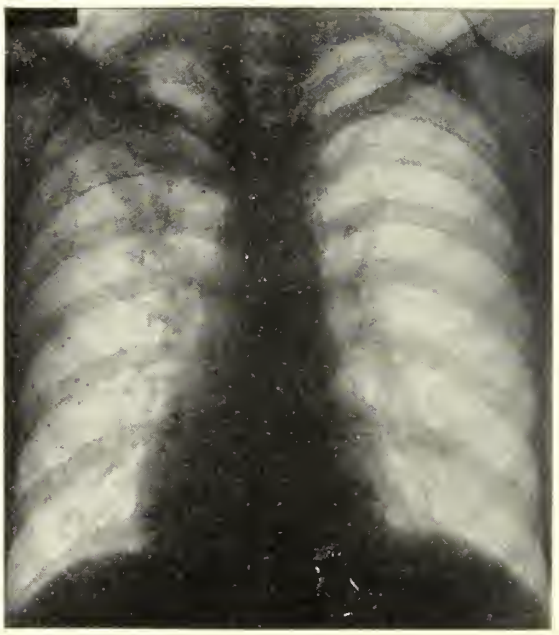


Fig. 2. The second roentgenogram of the same patient was taken seventy-eight days later and ten days following the onset of an acute grippelike disease. It shows a rather extensive infiltrative lesion in the left infraclavicular region with beginning central excavation.

conception have been presented by different observers, but most of them agree that it is this infraclavicular infiltrative lesion, and not the truly apical productive one, which is serious in terms of the development of progressive disease.

A study of the onset and type of lesion in two hundred cases has been made in an attempt to check the accuracy of the view that ascribes so much importance to the infraclavicular lesion.

Cavity formation was particularly observed as to the point of origin, migration, and especially the time of appearance in relation to onset. The rapidity of formation of cavities after onset, with the tendency to form in the subapical region and migrate upwards, was very striking. The x-ray was found to be the most useful in detecting the early development of the subapical lesion and bears out the value of using the x-ray as an adjunct to physical examination in every suspected chest condition.

Tabulation of Facts Studied

In these two hundred cases, a very careful history of the onset and course was taken, and every available x-ray of each case was studied. With this information tabulated, the following points stand out strikingly:

1. In pulmonary tuberculosis, sudden onset is not less frequent than is insidious onset.

2. Apical involvement is not characteristic of incipiency, but occurs in the majority of cases after the incipient stage has passed.

3. The extent of the lesion does not bear a direct relation to the duration of the disease. Of all patients reaching the far-advanced stage, the majority do so within the first half-year.

4. Cavitation is not a late occurrence; its frequency is nearly the same at any stage of the disease.

5. Apical involvement bears a close relation to the type of the clinical course.

6. An analysis of patients with pulmonary tuberculosis as to the two characteristics—"apices involved" and "type of onset"—leads to the differentiation of two different clinical types of disease. The one with apices free has a sudden onset with a bronchopneumonia (tuberculous) which usually progresses rapidly with acute exacerbations and the early development of advanced disease. The other type has an insidious onset, involves the apex primarily, and progresses very slowly, if at all.

Apical lesions as such are not always benign, as they often are the result of spread upward from a subapical lesion; however, this study would indicate that true apical tuberculosis seldom progresses caudalward to extensive disease.

Summary of Conclusions

1. Progressive and destructive pulmonary tuberculosis usually begins *suddenly*, with *exudative subapical* lesions.

2. Strictly apical productive tuberculosis is not, as a rule, the incipient stage of progressive and destructive pulmonary tuberculosis; it may precede the latter; but even in such cases, the latter starts usually as stated under 1. The rôle which apical tuberculosis plays in phthisiogenesis is rather insignificant as compared to that of acute subapical infiltrations.

3. Lesions far advanced as to extent, and excavations, frequently develop within less than six months.

4. Processes leading to active progression and to excavation are most frequently associated with acute symptoms.

5. Apical involvement, in the majority of patients, is not an occurrence of incipiency but a late development.

6. Diagnostic and therapeutic endeavors should be directed towards the acute subapical processes, and not only towards the insidious apical disease.

7. Physical signs and symptomatology, traditionally described as characteristic for "incipient pulmonary tuberculosis," are misleading for the detection of truly incipient subapical acute processes.

TUBERCULOSIS and health associations throughout the United States are making plans for an early diagnosis campaign to be conducted during April, 1930. Billboards, posters, pamphlets, newspaper and magazine articles will emphasize the importance of discovering the early signs of tuberculosis in children.

THE MEDICAL SOCIETY
OF THE
STATE OF PENNSYLVANIA

Minutes and Proceedings of the Seventy-Ninth Annual Session, Erie, September 30 to October 3, 1929

MINUTES OF THE HOUSE OF DELEGATES

Monday Afternoon, September 30, 1929

The first meeting of the House of Delegates was called to order in the Ballroom of the Masonic Temple, Erie, Pa., on Monday, September 30, 1929, at 3.30 p. m., by the president, Dr. Thomas G. Simonton, Pittsburgh.

DR. SIMONTON: The seventy-ninth annual session of the House of Delegates of the Medical Society of the State of Pennsylvania will please come to order. We will first hear the preliminary report of the Committee on Credentials.

DR. JEFFERSON H. WILSON, Beaver: We have sixty-three delegates registered.

THE PRESIDENT: Twenty delegates constitute a quorum. We are ready for business. Kindly turn to page 25 of the Program. If there is no objection to the order of business as printed, we will proceed. The Secretary advises that it is unnecessary to have a roll call at this time. The next order of business is the presentation, correction, and adoption of the minutes of the seventy-eighth annual session.

DR. CLOY G. BRUMBAUGH, Huntingdon, moved that the minutes be accepted as published in the November, 1928, JOURNAL.

The motion was seconded by Dr. Alexander H. Stewart, Indiana, and unanimously carried.

THE PRESIDENT: In accordance with the custom of the Society your president will make a brief report with comments, of his official activities during his term.

REPORT OF THE PRESIDENT

DR. THOMAS G. SIMONTON: The chairman, in making his report for two years, records with deep regret the death of Dr. Lewis Taylor, of Luzerne County, President of this Society in 1912, and will ask the House of Delegates to stand out of respect to his memory, while the Secretary reads the resolutions drawn up by the Board of Trustees.

During my term as President-Elect and President, the following component county societies were visited: Allegheny, Beaver, Bradford, Bucks, Clinton, Erie (twice), Fayette, Indiana, Mercer, Montour, Northampton, Schuylkill, and Westmoreland; also the Third, Fourth, Sixth, Ninth, and Tenth Councilor District meetings; a meeting of the Northwestern Society; all meetings of the Board of Trustees; one public hearing at Harrisburg; and one Secretaries' Conference at the same place. I am sorry that all invitations from the other counties could not be accepted.

For the first time this year there was instituted a one-half-day conference of the Secretaries at Harrisburg. The State Society paid all expenses. Forty-eight county societies were represented by their secretaries or the editors of their bulletins, who gathered at this meeting to discuss their problems. The increased dues of our State Society were more promptly paid than during the preceding year, which is most gratifying.

The Endowment Fund contains approximately $37,000, the Medical Defense Fund $42,000, and the Benevolence Fund $58,000.

This year the Philadelphia County Society adopted the Medical Defense service of the State Society.

The Committee on Conservation of Vision was discontinued, as was the Committee on Laboratories.

Three hundred members attended the chiropractic legislation hearing at Harrisburg in February. The Schuylkill County Society was the banner society in point of members at the public hearing. Our members calling on the legislators from their own districts that day produced a wholesome effect.

A vote of thanks is due all members of the last Legislature who are also members of our Society: In the House, Drs. Kahle, Clarion County; Schaffer, Somerset County; Steedle, Allegheny County; and in the Senate, Dr. Bell, Fayette County; all county society legislative committees; all secretaries and presidents of the county societies; as well as Drs. Paul Correll, Ross V. Patterson, and Walter F. Donaldson, for their fidelity and labors in behalf of our legislative program for the 1929 Session.

Dr. Paul Correll gave of his time sixty-seven days away from home without remuneration, except for his actual expenses. As I stand here and look into your faces, I wonder how many of you would be willing to give this much of your time, and absence from business or make this sacrifice for our cause.

Dr. Ross V. Patterson, who served on the Freeman Commission, was a tower of strength. With his back to the wall, and often single handed, he was compelled to ward off the thrusts and insults of the cults, and you know full well how he espoused our cause.

To Dr. Walter F. Donaldson fell the work of providing ammunition, and otherwise aiding the campaign

along with his regular secretarial duties. His health was temporarily impaired under the load.

As one State Senator remarked "We have the strongest of organizations in our combined county, state, and national societies, and can obtain any legislation desired, provided our cause is just."

It has been said that organized medicine does not know what it wants, which may have been true in the past, but if we maintain our present organization, built up during the past two years, our influence will be felt, and we shall not drift into a lethargic state as before, but keep and maintain that which has been achieved at great effort and expense.

Individual legislative plans must have the approval of the County Society Legislative Committee in which they arise, and then be passed on to the Public Health Legislation Committee of the State Society for approval before action is taken. In this way we may keep our State organization intact and add strength to the movement. Only in this way can the State Legislative Committee successfully lay the groundwork for its presentations to the Legislature.

Tuberculosis Day and Cancer Day programs have been maintained by active county society committees, and this year the State Committee on Mental Hygiene has requested the setting aside of one meeting during the year for the consideration of this subject by each county society.

Some of you may not be interested in these topics, but you may become back numbers, since the subject is coming more and more to the front, and is national in scope. Our State Committee should be commended for their timely efforts, and our help should be given to keep at the minimum the number of these unfortunate wards of the State.

The Woman's Auxiliary is organizing in more counties each year. Their influence is decidedly felt in addition to their generous efforts in behalf of the Benevolence Fund. Their members were a great help in obtaining signatures to the educational petitions. Their influence with their husbands has increased the attendance at our State meetings.

The State JOURNAL, under the able editorship of Dr. Frank C. Hammond and the management of the Board of Trustees, has reached a commanding position among state journals. Dr. Morris Fishbein has said, "It is the best of all the State Journals." Ethical in character and in scope, of high scientific attainments in regard to its articles and editorials, we may well be proud of its advance among the medical publications of today. Dr. Hammond has completed ten years of service as Trustee and Councilor, the time limit fixed by our By-Laws, but from his editorial chair it is to be hoped he will be in touch with us for many years to come.

To the Secretaries and Presidents of the County Societies, and the District Councilors, whose meetings I attended, I want to offer my sincere thanks for their courteous treatment.

The State Society has always promoted progress, and may it be said in the years that are to come, we have *each* year steadily progressed.

The president then announced the appointment by President-Elect Sharpless of the following committees of the House of Delegates:

Committee on Credentials: Jefferson H. Wilson, Beaver, chairman; Lee M. Goodman, Jersey Shore; J. Craig McAllister, Ridgway.

Reference Committee on Reports of Officers and Standing Committees: J. Norman Henry, Philadelphia, chairman; Delbert K. Santee, Bethlehem; Arthur H. Gross, Bellevue.

Reference Committee on Scientific Business: Charles H. Miner, Wilkes-Barre, chairman; Charles H. Smith, Uniontown; John F. Culp, Harrisburg.

Reference Committee on New Business: Curtis C. Mechling, Pittsburgh, chairman; Merchant C. Householder, Pottsville; Peter H. Dale, State College.

Committee on Place of Meeting: J. Newton Hunsberger, Norristown, chairman; Frederick S. Baldi, Philadelphia; Francis De Caria, Bradford.

We will now proceed to the reports of the different officers of the Society. If the officers or chairmen of any of the committees have any suggestions to add to their reports as published in the September, 1929, JOURNAL and the program, as the report is called for, they will please rise and state same.

As no additions were offered to the reports, the president referred the published reports as follows:

To the Reference Committee on the Reports of Officers and Standing Committees: The reports of the Secretary, Treasurer, Chairman of the Board of Trustees, individual councilors, Committee on Public Health Legislation, Committee on Public Relations, Committee on Medical Benevolence, Committee on Necrology, Delegates to the 1929 Session of the American Medical Association.

To the Reference Committee on Scientific Business: The reports of the Committee on Mental Hygiene, Commission on Cancer, Commission on Compensation Laws.

To the Reference Committee on New Business: Committee on Lay Education, Conference Committee with Pennsylvania Pharmaceutical Association, Commission to Confer with Various Private and Governmental Health Agencies, Delegate to the 1929 Session of the Pennsylvania Pharmaceutical Association.

THE PRESIDENT: The next order of business is the reading of correspondence.

SECRETARY DONALDSON: I have but one communication to refer to the House of Delegates, as follows:

TO THE SECRETARIES OF THE STATE, DISTRICT, AND COUNTY MEDICAL SOCIETIES OF THE AMERICAN MEDICAL ASSOCIATION.

Dear Doctor:

The Joint Committee on Maternal Welfare is still desirous of keeping the medical profession informed about some of the activities which are tending to improve obstetric practice.

The deaths of mothers and infants constitute not only a medical, but a social problem as well. There are strong movements all over the world to improve by legislative and other means the conditions surrounding maternity and infancy, to the end that the health and lives of mothers and infants may be conserved.

Thus far medical societies have done little constructive work to improve these conditions. Individual practitioners have done much, but something more is necessary. It is important to realize that there is more involved than the relationship of the individual practitioner to his patient. Lay groups must be educated to the importance of proper obstetric care, and plans should be worked out in various communities to provide proper medical and nursing care for all mothers, prospective mothers, and infants in these communities. This involves the development of plans of care for rich and poor—in both thickly and sparsely settled communities.

Medical men should realize and understand that lay and nursing groups are vitally interested in these problems. Medical men who are interested in these obstetric questions should undertake the leadership in their own societies and communities for the benefit of the maternal and infant health and also of the medical and allied professions.

The secretaries are requested to bring these matters before their societies or place them in the hands of some member who is actively interested in working out such local plans. Any member of this committee would be glad to communicate with any one who is interested in these important problems.

Respectfully yours,

DR. R. W. LOBENSTINE, 119 E. 74th Street, New York, N. Y.
DR. R. L. DENORMANDIE, 355 Marlborough Street, Boston, Mass.
DR. M. P. RUCKER, 118 E. Franklin Street, Richmond, Va.
DR. L. E. PHANEUF, 395 Commonwealth Avenue, Boston, Mass.
DR. JAMES A. HARRAR, 119 E. 74th St., New York, N. Y.
DR. FRANK W. LYNCH, University of California Hospital, San Francisco, Calif.
DR. GEORGE W. KOSMAK, 23 E. 93rd Street, New York, N. Y.

DR. W. C. DANFORTH, 708 Church Street, Evanston, Ill.
DR. R. D. MUSSEY, Mayo Clinic, Rochester, Minn.
DR. R. W. HOLMES, Rugby Hills, University, Va.
DR. FRED L. ADAIR, 2500 Blaisdell Avenue, Minneapolis, Minn.

This letter was referred to the Committee on Scientific Business.

THE PRESIDENT: We will now proceed to new business. Is there any new business to come before the House of Delegates?

DR. SAMUEL P. MENGEL, Wilkes-Barre, presented the following resolution:

WHEREAS, Section 9 in Article V of the Constitution makes it obligatory for a member to be sixty-five years of age before he is eligible to become an affiliate member, and

WHEREAS, this provision makes it a hardship for some members who are really entitled to become affiliated members, therefore be it

Resolved, That the House of Delegates request the Board of Trustees to consider and recommend a change in the By-Laws if necessary to correct this situation.

THE PRESIDENT: This resolution will be referred to the Committee on New Business. Is there anything further?

DR. ARTHUR C. MORGAN, Philadelphia, presented the following resolution:

Resolved, That the House of Delegates of the Medical Society of the State of Pennsylvania, in session at Erie, endorses the purpose sponsored and undertaken by the Committee on the Study of the Cost of Medical Care, under the able leadership of Ray Lyman Wilbur, M.D., Secretary of the Interior, of securing for the medical profession of the United States proper recognition of their work, and proving to the people of the country at large that their financial returns are just and equitable in return for the years that are demanded of them in preparation therefor, and for the character of service performed, as well as the unusual risks encountered in their vocation.

ARTHUR C. MORGAN.

THE PRESIDENT: This will be referred to the Reference Committee on New Business. Is there anything further?

DR. ELMER L. MEYERS, Wilkes-Barre, presented the following resolution, which is a copy of a resolution passed by the Illinois State Medical Society at Peoria, Ill., May 23, 1929.

Whereas, Much misinformation is promulgated today on the question of diets, causing the introduction in the American diet of food fads; and

Whereas, Very few of these fad foods can take the place of the older staple foods, good meat, dairy products, green vegetables, fruits, and the better grades of bread prepared from white flour; and

Whereas, Any balanced diet should contain animal protein, fruits, and vegetables, especially the leafy vegetables, which will insure adequate vitamin and mineral-salt content, digestible fat such as butter fat, and sufficient of the digestible carhohydrates to afford readily available energy; and

Whereas, Carbohydrates, including sugars and starches, but especially starches, furnish the American public their main fuel for energy, the quantity varying with the amount of physical activities which the individual expends; and

Whereas, Much of the starch should be supplied by the most available and easily digestible foodstuffs, of which white flour is an excellent example; and

Whereas, The allegation that white bread, meat, or any other staple food, when employed in a mixed diet, is responsible for certain grave illnesses is not supported by scientific facts; therefore, be it

Resolved, That we desire, in the public interest, to place on record that in our opinion:

1. The exaggerated claims for various food fads are entirely unwarranted by scientific evidence or practical experience; and the advertising and other propaganda furthering their substitution for the older articles of diet should be condemned.

2. The danger of nutritional deficiencies has been grossly exaggerated. No one food is a perfect food; but a diet consisting of dairy products (especially milk), leafy vegetables, fruits, meats, and easily digested starches for heat and energy, furnishes an excess of all food factors necessary for proper growth and nutrition and resistance to disease.

3. Any variation from normal diet should be prescribed only by a properly trained adviser after a careful study of the dietary requirements of the individual seeking advice.

THE PRESIDENT: If there is no objection this will be referred to the Reference Committee on Scientific Business. If any member wishes to present anything under the head of new business, for the good of the State Society, the component county societies, or the national society, we shall be very glad to consider it.

THE SECRETARY: I wish to make an announcement, with your permission. The chairmen of the reference committees should come forward before the House adjourns and announce where and when their committees will meet. They may meet in any of the rooms on this floor, which have been arranged for the purpose. Any resolutions that have been introduced today, and all the reports that have been published, will be considered by these committees, and it is possible, if the committees will meet promptly, that all business can be completed at our regular meeting on Wednesday, and the House will not have to meet thereafter.

The chairmen of the various reference committees announced the place at which their committees would meet immediately after the adjournment of the House of Delegates.

DR. CURTIS C. MECHLING, Pittsburgh, asked if any members of his committee were absent, so that the chair could fill the vacancies before adjournment.

Upon inquiry it was found that Dr. Peter H. Dale was absent, and President Simonton requested Dr. Mechling to confer with President-Elect Sharpless in reference to a substitute.

Dr. Sharpless announced the appointment of Dr. Francis B. Jacobs, West Chester, to serve on this committee in place of Dr. Dale.

THE PRESIDENT: If there is nothing further in the way of new business, the next order of business is fixing the time and the place of the next meeting.

DR. J. NEWTON HUNSBERGER moved that the next meeting of the House of Delegates be held on Wednesday morning, October 2, at 9 o'clock, in the Lodge Room on the fourth floor of the Masonic Temple.

Motion seconded and unanimously carried, and the House adjourned at 4.30 p. m.

THOMAS G. SIMONTON, *President*,
WALTER F. DONALDSON, *Secretary*,
CHRISTIAN B. LONGENECKER, *Asst. Secretary*.

Wednesday Morning, October 2, 1929

The second meeting of the House of Delegates was called to order in the Lodge Room of the Masonic Temple, Erie, on Wednesday, October 2, 1929, at 9.20 a. m., by the president, Dr. William T. Sharpless, West Chester.

THE PRESIDENT: The House of Delegates will please come to order. I wish to inquire of the Credentials Committee if there is a quorum present.

DR. JEFFERSON H. WILSON, Beaver: There is, Mr. President, ninety-seven delegates having registered at this time.

THE SECRETARY: I wish to suggest a slight change in the order of business. The next thing in order is the roll call, but I think you will remember that last year in Allentown there was some confusion caused by members coming in late and wishing to be seated. I would suggest that roll call be deferred and that the minutes of the first meeting of the House be read at this time, thus allowing a little more time for other delegates to register.

THE PRESIDENT: If satisfactory, we will have the reading of the minutes at this time.

Secretary Donaldson then read an abstracted report of the minutes of the meeting of the House of Delegates on Monday, September 30, 1929.

Dr. Lowman moved that the minutes be approved as read.

Motion seconded and unanimously carried.

The President: I will now ask the Secretary to call the roll of those delegates who have registered. Any delegate coming in later, or any one present whose name is not read can so announce.

The Secretary then called the roll, and reported that at its completion 103 delegates were present.

The President: The next order of business is election of officers, and nominations for president-elect are in order.

Dr. Paul R. Correll, Easton, nominated Dr. Ross V. Patterson, of Philadelphia.

The nomination of Dr. Patterson was seconded by Drs. Strittmatter of Philadelphia, Hunsberger of Norristown, Anderson of Pittsburgh, Goodman of Jersey Shore, and Carpenter of Pottsville.

Dr. Henry W. Salus, Johnstown, moved that the nominations be closed. Motion seconded and carried.

Dr. Elmer L. Meyers, Wilkes-Barre, moved that the nomination of Dr. Patterson be made unanimous. Motion seconded and unanimously carried.

The President: We are now ready for nominations for four vice-presidents.

The following members were nominated: first vice-president, Dr. Joseph A. Stackhouse, Erie; second vice-president, Dr. Randall B. Hayes, Jersey Shore; third vice-president, Dr. Herbert A. Bostock, Norristown; fourth vice-president, Dr. Alexander H. Stewart, Indiana.

On motion regularly seconded and carried the nominations for vice-presidents were declared closed.

The President: The next order of business is the election of a secretary. We are ready for nominations.

Dr. Henry D. Jump, Philadelphia, nominated Dr. Walter F. Donaldson, Pittsburgh, to succeed himself.

Dr. J. Norman Henry, Philadelphia, seconded the nomination and moved that the nominations be closed. Motion seconded and unanimously carried.

The President: We are now ready for nominations for an assistant secretary.

Dr. John M. Quigley, Clearfield, nominated Dr. Christian B. Longenecker, Philadelphia, to succeed himself.

Upon motion regularly seconded and carried nominations for assistant secretary were declared closed.

The President: The next thing in order is the election of a treasurer and we are ready for nominations.

Dr. Augustus S. Kech, Altoona, nominated Dr. John B. Lowman, of Johnstown, to succeed himself.

Dr. George A. Knowles, Philadelphia, moved that the nominations be closed. Motion seconded and carried.

The Secretary: The president requests me to announce that there are two vacancies on the Board of Trustees and Councilors to be filled. In the first Councilor District Dr. Hammond retires and in the sixth Councilor District Dr. Frontz retires.

Dr. J. Norman Henry, Philadelphia, nominated Dr. George A. Knowles, of Philadelphia, to fill the vacancy caused by the retirement of Dr. Hammond.

Dr. Thomas R. Currie, Philadelphia, seconded the nomination and moved that the nominations be closed. Motion seconded and carried.

Dr. Harold F. Moffitt, Altoona, nominated Dr. Augustus S. Kech, of Altoona, to fill the vacancy caused by the retirement of Dr. Frontz.

Upon motion regularly seconded and carried the nominations for councilors were declared closed.

The President: We are now ready for nominations for delegates to the American Medical Association. These delegates are nominated by the Committee on Society Comity and Policy.

Dr. Henry D. Jump, Philadelphia, presented the following nominations:

Delegates: J. Newton Hunsberger, Norristown; William H. Mayer, Pittsburgh; John A. Campbell, Williamsport; Frank P. Lytle, Birdsboro; John B. McAlister, Harrisburg; Orlando H. Petty, Philadelphia; Howard C. Frontz, Huntingdon.

Alternates-Designate: S. J. Waterworth, Clearfield; J. Treichler Butz, Allentown; John J. Buchanan, Pittsburgh; C. A. E. Codman, Philadelphia; Horace G. Kinzer, Lancaster; Earl R. Whipple, Steelton; James A. C. Clarkson, Lewistown.

Alternates-at-Large: Robert K. Rewalt, Williamsport; George W. Reese, Shamokin; Lever F. Stewart, Clearfield; George E. Holtzapple, York; John B. Lowman, Johnstown; Frank G. Hartman, Lancaster; Elmer Hess, Erie.

Dr. George A. Knowles, Philadelphia, moved that the report be accepted and the nominations declared closed. Motion seconded and unanimously carried.

Dr. John M. Quigley, Clearfield: As there is but one nominee for each of the offices, I move that the Secretary be instructed to cast the unanimous ballot of the Society. Motion seconded and carried.

The Secretary: Protesting against being thus forced to vote myself into office, I declare the ballot cast.

Upon motion regularly seconded and carried the President was instructed to cast a unanimous ballot for Dr. Donaldson as secretary.

The President: I hereby state that having shirked this important duty I now cast such a ballot, and declare Dr. Donaldson and all the other officers duly elected. The next thing in order is the election of District Censors.

The Secretary: There are sixty-two district censors to be placed in nomination, representing each society. I hold the cards of these nominees in my hand, and suggest that some one make a motion that these sixty-two nominees be elected and their names published in the proceedings of this meeting.

Dr. Charles B. Maits, Pittsburgh, moved that this be the procedure. Motion seconded by Dr. John B. Culp, Harrisburg, and unanimously carried.

District Censors

First District—Philadelphia County, W. Wayne Babcock, Philadelphia.

Second District—Berks County, Irvin H. Hartman, Reading; Bucks County, William G. Moyer, Quakertown; Chester County, U. Grant Gifford, Kennett Square; Delaware County, J. Clinton Starbuck, Media; Montgomery County, John T. MacDonald, Norristown; Schuylkill County, James A. Lessig, Schuylkill Haven.

Third District—Carbon County, Wilson P. Long, Weatherly; Lackawanna County, Charles B. Noecker, Scranton; Lehigh County, George F. Seiberling, Allentown; Luzerne County, Herbert B. Gibby, Wilkes-Barre; Monroe County, J. Anson Singer, E. Stroudsburg; Northampton County, Edward S. Rosenberry, Stone Church; Wayne County, Edward Otto Bang, South Canaan.

Fourth District—Bradford County, Rodney L. Stedge, Sayre; Columbia County, Charles B. Yost, Bloomsburg; Montour County, Horace V. Pike, Danville; Northumberland County, Charles M. Thomas, Sunbury; Susquehanna County, William J. Condon, Susquehanna; Snyder County, Percival Herman, Selinsgrove; Wyoming County, William W. Lazarus, Tunkhannock.

Fifth District—Adams County, J. McCrae Dickson, Gettysburg; Cumberland County, Newton W. Hershner, Mechanicsburg; Dauphin County, Hiram McGowan, Harrisburg; Franklin County, William C. Schultz, Sr., Waynesboro; Lancaster County, Walter J. Leaman, Lancaster; Lebanon County, William M. Guilford, Lebanon; York County, Louis S. Weaver, York.

Sixth District—Blair County, W. Albert Nason, Roaring Springs; Center County, James L. Seibert, Bellefonte; Clearfield County, Evan L. Jones, Philipsburg; Huntingdon County, William J. Campbell, Mt. Union; Juniata County, Isaac G. Headings, McAlisterville; Mifflin County, Frederick A. Rupp, Lewistown; Perry County, J. E. Book, Newport.

SEVENTH DISTRICT—Clinton County, Saylor J. McGhee, Lock Haven; Elk County, John C. McAllister, Ridgway; Lycoming County, Wesley F. Kunkle, Williamsport; Potter County, Elwin H. Ashcraft, Coudersport; Tioga County, Lloyd Gamble Cole, Blossburg; Union County, Oliver H. Glover, Laurelton.

EIGHTH DISTRICT—Crawford County, Clyde L. Williams, Linesville; Erie County, Orel N. Chaffee, Erie; McKean County, Joseph A. Kervin, Bradford; Mercer County, August M. O'Brien, Sharon; Warren County, Otis S. Brown, Warren.

NINTH DISTRICT—Armstrong County, Thomas N. McKee, Kittanning; Butler County, Willis A. McCall, Butler; Clarion County, Byron P. Walker, West Monterey; Indiana County, Charles E. Rink, Indiana; Jefferson County, Spencer M. Free, Dubois; Venango County, Jacob P. Strayer, Oil City.

TENTH DISTRICT—Allegheny County, David P. McCune, McKeesport; Beaver County, Albert N. Mellott, Ambridge; Lawrence County, C. Fenwick McDowell, New Castle; Westmoreland County, Urbin H. Reidt, Jeannette.

ELEVENTH DISTRICT—Bedford County, Walter F. Enfield, Bedford; Cambria County, John W. Barr, Johnstown; Fayette County, Freeman S. Hoover, Brownsville; Greene County, Thomas N. Millikin, Waynesburg; Somerset County, George A. Noon, Listie; Washington County, James H. Corwin, Washington.

DR. I. HOPE ALEXANDER, Pittsburgh, moved that the following be elected to affiliate membership: John Ballagi, Ewing W. Day, John Purman, Allegheny County; John C. Gilland, Franklin County; Reed Burns, Louis H. Gibbs, Lackawanna County; Henry Armstrong, Mercer County; Vincent I. McKim, Mifflin County; Henry L. McCoy, McKean County; George R. Anderson, Francis H. Erwin, Northampton County; James F. E. Colgan, Dudley T. Cooke, J. Edward Wallis, Philadelphia County; Henry Clay McKinley, Somerset County; Henry V. Gress, York County.

Motion seconded and unanimously carried.

THE PRESIDENT: The next order of business is the report of the Committee on Place of Meeting.

DR. J. NEWTON HUNSBERGER, Norristown: Your Committee on Place of Meeting for 1930 presents the following: Johnstown, which has not been chosen for a meeting since 1899; Harrisburg, where we met in 1925; and Scranton, where we met in 1922. These cities have all been investigated as to their ability to provide creature comforts and take care of the social features of our annual session, and while some are not so well equipped, perhaps, as Philadelphia, Pittsburgh, or Erie, we must not forget the personal touch we sometimes get in meeting in smaller cities. I ask the indulgence of the House to allow the representatives of these cities five minutes each to show us what they have.

THE PRESIDENT: I think three minutes will be sufficient, and we will now hear from Dr. Redding.

DR. LEONARD G. REDDING, Scranton: I could not tell you all about Scranton in three minutes, but Scranton withdraws in favor of Johnstown.

DR. EDWIN A. NICODEMUS, Harrisburg: You all know what Harrisburg has been and we have increased facilities there since the last meeting. Our invitation was not given with the idea of forcing it on the Socicty; so in order to preserve good feeling we are quite willing to withdraw in favor of Cambria County.

DR. OLIN G. A. BARKER, Johnstown: It gives me great pleasure to invite the Medical Society of the State of Pennsylvania, on behalf of the Cambria County Medical Society, to meet with us in 1930. We greatly appreciate the courtesy shown by Dauphin County and Lackawanna County in withdrawing in our favor. We should like to have a meeting in southern Pennsylvania. The facilities in Johnstown have been investigated and found to be satisfactory, and I assure you that the Cambria County Society will do everything possible to insure a successful meeting.

THE PRESIDENT: Harrisburg and Scranton have withdrawn, and we have a very gracious invitation from Johnstown. What is your wish?

Upon motion, regularly seconded and carried, Johnstown was selected as the meeting place for 1930.

THE PRESIDENT: The next order of business is unfinished business, but Dr. Donaldson wishes to offer a suggestion.

THE SECRETARY: Two communications have been handed in which should be acted upon today. I would like to suggest that the order of business be changed so that these communications can be received at this time and referred to the proper committees. Then while we are on unfinished business they can be considered and acted upon before the adjournment of the House.

DR. MOSES BEHREND, Philadelphia, moved that this be the order of procedure. Motion seconded and unanimously carried.

ASSISTANT SECRETARY LONGENECKER presented the following resolution, which had been submitted by Dr. John O. Bower, Philadelphia:

There was an increase of 22.3 per cent in the mortality of appendicitis in the United States between 1913-1923. The surgeons feel that the abuse of laxatives and delay in seeking surgical advice is the cause of this increase. This has been corroborated by an analysis of the clinical records of over a thousand cases of appendicitis at two different hospitals in Philadelphia, where it was found that 45 per ceut of the appendices have perforated. Of those who died, 78 per cent had a general peritonitis and 88 per cent of these were given laxatives.

Dr. A. A. Cairns, Director of Public Health, Philadelphia, is about to institute a campaign against laxatives and delay in the treatment of appendicitis.

We offer a motion that the House of Delegates go on record endorsing this campaign by Dr. Cairns in Philadelphia, and further, that a committee of five be appointed to make a State-wide survey of this problem, and submit a report with recommendations at the 1930 session of the House of Delegates.

JOHN O. BOWER,
MOSES BEHREND.

Dr. Longenecker moved that this resolution be referred to the Reference Committee on Scientific Business, to be considered at once. Motion seconded and carried.

THE SECRETARY: The second communication refers to a petition that was given interim consideration by the Board of Trustees. I have promised that it shall be brought to the attention of the House of Delegates. It is as follows:

To the Board of Trustees: In view of the fact that the American Medical Association recognizes a section on dermatology and syphilology, and inasmuch as the trend of modern practice is towards the linking together of skin diseases and syphilis, we, the undersigned, propose that the name, "Section on Dermatology" of the Medical Society of the State of Pennsylvania be changed to "Section on Dermatology and Syphilology" of the Medical Society of the State of Pennsylvania.

(Signed) Jay F. Schamberg, John H. Stokes, George E. Pfahler, George P. Katzenstein, Carroll S. Wright, Sigmund S. Greenbaum, David M. Sidlick, Edward Corson, Joseph V. Klauder, Simon Katz, George Busman, Lester Hollander, A. Strauss, Maurice Brown, Lawrence G. Beinhauer, William H. Guy, B. A. Goldman, Fred M. Jacob, Louis Willard, W. A. Copeland, Frederick Amshel, Joseph J. Hecht, S. R. Cohen, Franklin B. Miller, Abraham Fisber, and A. R. Woodburne.

The Board of Trustees, when they received this communication in May, decided to seek the advice of the Committee on Scientific Work. After considerable discussion, by a majority vote, this committee recommended the proposed change in the name of the Section on Dermatology to the "Section on Dermatology and Syphilology." The Board of Trustees, at their meeting on Monday, advised by a majority vote that it be adopted. Article VI provides that the House of Delegates may divide the scientific work of this Society into appropriate sections. I think the request should be referred to the Reference Committee on Scientific Business.

On motion regularly seconded and carried this was the procedure adopted.

THE PRESIDENT: Any one who wishes to speak in favor of or against this change will please appear

before the Reference Committee on Scientific Work at once. We will now have the reports of the reference committees, and will hear first from Dr. Henry, chairman of the Reference Committee on Reports of Officers and Standing Committees.

DR. J. NORMAN HENRY, Philadelphia, presented the following:

REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND STANDING COMMITTEES

The Secretary's report contains matters of general interest to the Society and in a very real sense may be taken as a survey of the activities of the Society, social and financial. It displays on the part of the Secretary the usual careful painstaking interest which we have long grown to expect from Dr. Donaldson. Worthy of special comment is his allusion to the matter of the practice of medicine by employees of corporations, private and social agencies, and this must be condemned in all cases where such practice is carried on contrary to law by any but licensed physicians, both for the protection of the public and the physicians as well.

Two other valuable points are stressed by the Secretary; namely, the matter of the carelessness of physicians in regard to remarks which may involve a brother practitioner in a lawsuit, and the importance of x-rays in all cases where even remotely indicated, or a quittance from responsibility if the patient refuses this advice. We are thus reminded of our responsibility for those things we have done and those we have left undone.

Membership shows a slight increase largely due to gains in Berks, Lackawanna, and Philadelphia Counties.

Medical defense has been actively carried on, and the coöperation of Philadelphia County has reacted to the benefit and satisfaction alike of the State and that county.

The Tristate Conference holds out promises of value, and should be continued.

The Woman's Auxiliary has again gone a long way toward proving its value in maintaining interest among the membership in general, and in showing its own interest by generous and valuable money contributions to the Benevolence Fund—$1,783. A special vote of thanks is due them.

The Treasurer's report shows the financial state of the Society to be in excellent case—with a balance of $58,000, $42,000, and $37,000 respectively in the Benevolence, Defense, and Endowment Funds.

The Chairman of the Board of Trustees in his report for the Board speaks emphatically of the excellence of the JOURNAL, and this statement the committee heartily endorses.

A step in the right direction has been taken in Philadelphia and Lancaster to eliminate from the medical section of the Bell Telephone Company Directory the names of any but licensed physicians.

The Committee notes with satisfaction the holding of a conference between the Governor of Pennsylvania and the Board of Trustees wherein medical matters were discussed. This is as it should be, and a close coöperation between our Society and the State Executive might go far toward eliminating all legislative problems.

The councilors' reports in general show the usual attention to duty that characterizes the work of each and every one. Broadly these reports deal with activities of the component societies and disclose for the most part that they are holding their own in respect to numbers and in scientific and scarcely less important social activities.

The councilor for the First District calls attention to the internal activities of Philadelphia County which are valuable and progressive. The radio talks and weekly popular lectures to the laity should be imitated in other counties. He alludes to the raise in dues which has caused no loss in membership, but rather the contrary, as the membership has undergone an increase. There is an allusion in his report to a lack of interest shown by Philadelphia County in regard to the legislative program. This criticism, however, is not altogether just and should be moderated in the light of certain circumstances. In the first place, in a society the size of Philadelphia, work of this kind must of necessity be delegated to a committee, and not infrequently the committee in its turn puts the whole burden upon its chairman. In much this way was the matter handled in Philadelphia. A great deal of quiet work was done by individuals with members of the Legislature, and we can safely say that the movement that spelled success came from Philadelphia County to a great extent.

Montgomery County Society has the honor of having one of the members of its Woman's Auxiliary chosen as president-elect of the Woman's Auxiliary of the American Medical Association—Mrs. J. Newton Hunsberger.

The Bucks County Medical Society celebrated its eightieth birthday, when, to quote Councilor Buyers, the veteran secretary, Dr. Myers, read the minutes of the first meeting.

Councilor Brenholtz reports that every member of the Seventh Legislative District was visited in behalf of the medical legislative program by the key-men committees and by the Councilor.

The Committee on Public Health Legislation has again been conspicuously successful in stemming the tide of the irregular and ignorant cultists and quacks who at every legislative meeting press forward with bills to make legal their dangerous practices. It is to be hoped that a constructive program may soon be adopted and a bill covering the needs of the State passed, thus bringing to an end the difficult and disagreeable task of descending more or less to the level of these people for the time, and opposing them on the legislative floors.

The Committee on Public Relations makes a suggestion of value when it recommends that all county societies should coöperate in aiding health and welfare organizations in sickness prevention.

The Committee on Medical Benevolence reports marked progress, and we recommend the adoption of their report.

The Committee on Necrology requests the coöperation of the House of Delegates in securing the fulfillment of the amendment adopted by the 1928 House of Delegates, which is embodied in the second paragraph of their report. We highly recommend the adoption of this report.

In making his report of the delegation to the American Medical Association, Dr. Donaldson makes an allusion, well-timed in our opinion, as to the time and energy wasted during annual A. M. A. meetings in furthering the advancement of this or that place for the next meeting and for this or that man for the office of president.

The committee would value the privilege of being permitted to convey the thanks of the House to the officers, trustees, councilors, and committees for faithful work well done, and the chairman so moves.

J. NORMAN HENRY, *Chairman*,
D. K. SANTEE,
ARTHUR H. GROSS.

DR. HENRY D. JUMP, Philadelphia, moved the adoption of this report. Motion seconded and unanimously carried.

THE PRESIDENT: The House of Delegates is greatly obliged to you, Dr. Henry, and your committee, for your care of these matters and the very excellent report you have made. As the Reference Committee on Scientific Business is still in conference, we will next hear the report of the Reference Committee on New Business.

DR. CURTIS C. MECHLING, Pittsburgh, chairman, presented the following report:

REPORT OF THE REFERENCE COMMITTEE ON NEW BUSINESS

Report of Committee on Lay Education: The Reference Committee have noted with interest the high standards of the personnel of this committee, which undoubtedly give the report an added interest. They have referred specifically to their duties; first to keep the laity informed as to the activities of organized medicine; second, to help safeguard the public health; and third, to wage unceasing war on those who would abuse the people's confidence in the name of medicine. They have sounded a cheering note when they refer to the eagerness of the public for propaganda on the basic knowledge of health. They have called attention to the large amount of publicity given out by the Committee on Public Health Legislation, and also to the splendid programs of lay education fostered by the State Department of Health. We recommend the adoption of this report.

Report of the Commission Dealing With the Various Private and Governmental Health Agencies: This committee specifically refers to the marked improvement of the relations existing between the public and private health agencies and the practicing physician. Both the physicians and health agencies recognize the great assistance that each may be to the other in the field of preventive medicine and further in the economic policies of the different agencies. They note that this improvement is widespread and well nigh general throughout the State. They note further the growing custom of having a medical man included in the governing boards of the various health agencies. The obvious advantage of such an arrangement does not need comment, and it is particularly recommended to all organizations which have to do with the sick, either in the healing or the preventive sense. We approve the report of this committee.

Report of the Conference Committee with Pennsylvania Pharmaceutical Association: This report makes specific recommendations which are worthy of notice; namely, the advocating of occasional joint meetings of the two organizations for the discussion of mutual problems. It calls attention to the fact that the pharmaceutical profession was active in aiding our Public Health Legislation Committee during the 1929 session of the State Legislature. The report recommends a continuation of the close relationship between the two organizations. That this policy has been growing is evidenced by the fact that a delegate to the 1929 session of the Pennsylvania State Pharmaceutical Association was appointed and served. His report may be found on page 146 of the Program, and we recommend its perusal by the delegates. The Committee approves the report of the Conference Committee.

Resolution No. 1: This resolution is approved by your Committee. We wish to call attention to a preliminary report of Dr. Ray Lyman Wilbur in a recent pamphlet and questionnaire sent out by the Committee of the A. M. A. on the Cost of Medical Care, as we believe it is doing a timely service in anticipating a discordant note among the laity, and therefore forestalling great changes which are bound to occur through the instigation and pressure of outsiders. Questionnaires have been sent out and we recommend the filling out and prompt return of these questionnaires.

Resolution No. 2: We recommend the adoption of this resolution. We believe that the article in the Constitution referred to might be materially improved as regarding the qualifications for affiliate membership. The writer of the resolution has given your committee specific instances of unintentional disappointments to doctors who greatly desire and are deserving of affiliate membership, and who are deprived of this by reason of the particular wording of the Constitution. We believe the changes referred to are commendable and should be made.

MERCHANT C. HOUSEHOLDER,
FRANCIS B. JACOBS,
CURTIS C. MECHLING.

Dr. Mechling moved the adoption of this report. Motion seconded.

DR. CLARENCE R. PHILLIPS, Harrisburg, suggested that a statement be made by the Secretary concerning what constituted affiliate membership.

Secretary Donaldson explained briefly the requirements for affiliate membership, following which the motion to adopt this report was put to a vote and unanimously carried.

The President expressed to Dr. Mechling and his committee the appreciation of the House of Delegates for their work and report.

DR. JOHN M. QUIGLEY, Clearfield: In recognition of the splendid program of entertainment which the Erie County Medical Society has provided for the members of our Society and their families, I move a rising vote of thanks. Motion seconded and unanimously carried.

THE PRESIDENT: The Erie County Medical Society is hereby officially thanked for the excellent entertainment they have arranged.

Has the Board of Trustees any recommendation or report that should come before this House of Delegates?

DR. FREDERICK J. BISHOP, Scranton: The Board of Trustees, through the Finance Committee, recommends that the allotment from each member's annual dues of $7.50 to the two funds be the same as last year—$1.00 to the Medical Benevolence Fund and 25c to the Medical Defense Fund.

DR. CHARLES B. MAITS, Pittsburgh, moved that this recommendation be concurred in. Motion seconded and unanimously carried.

THE PRESIDENT: Has any one from the Board of Trustees any further recommendation for the House of Delegates that can be considered while we are waiting for the report of the Committee on Scientific Business?

DR. JAMES D. LEWIS, Scranton: I wonder whether this would not be a good time to bring before the House the results accomplished by some of our members. I know that Dr. Paul R. Correll, of Easton, and his fellow committeemen have done a great deal of work for us, and I move that the House of Delegates make some official recognition of their self-sacrificing work. Motion seconded and unanimously carried.

THE PRESIDENT: The Reference Committee on Scientific Business is now ready to report.

DR. CHARLES H. MINER, Wilkes-Barre, chairman, presented the following:

Report of the Reference Committee on Scientific Business

This Committee has had the reports of five commissions and committees and also one letter and one resolution referred to it.

We commend the excellent report of the Committee on Mental Hygiene, and recommend that they be given every encouragement to continue their campaign of education during the coming year. We believe that all physicians should be stimulated to take a greater interest in the mental health of the community and in the early recognition, diagnosis, and treatment of the mentally ill. Millions of dollars are needlessly being spent in Pennsylvania every year in dealing with the results of feeble-mindedness. It would be wiser to study the problem more systematically and provide measures for its prevention, even though the expenditure of relatively large sums of money is at first necessary. We recommend the adoption of their report.

The Commission on Cancer has been very active in promoting interest in the early diagnosis and treatment of cancer by means of special cancer meetings, by efforts to secure a definite appropriation from the State Legislature, and by efforts to induce every general hospital in the State to establish a cancer clinic. We recommend the adoption of their report.

The Commission on Compensation Laws reports the continuance of the Society's policy adopted the previous year. We recommend the adoption of this report.

The letter to the Secretary from the Joint Committee on Maternity Welfare from four national organizations suggests that medical men who are interested in these obstetric questions should undertake the leadership in their own societies and communities for the benefit of maternal and infant health. This we endorse, and we recommend that all county societies coöperate with their local health departments and with the State Department of Health in developing workable plans for carrying on this highly important service.

The resolution presented at the request of the Pennsylvania Millers' Association, protesting against food fads and recommending a properly balanced diet, meets with our approval. We recommend its adoption and its publication in the Pennsylvania Medical Journal.

The resolution changing the name of the Section on Dermatology to that of "Section on Dermatology and Syphilology" was referred to our committee so late that there has not been sufficient time for proper consideration. We recommend, therefore, that it be referred back to the Committee on Scientific Work, for their report at the 1930 session.

In regard to the resolution concerning the increase in mortality of appendicitis, we recommend that it also shall be referred to the Committee on Scientific Work for their report at the 1930 session.

Charles H. Miner, *Chairman,*
Charles H. Smith,
John F. Culp.

This report was considered section by section, and the following action taken:

Paragraph 1—Committee on Mental Hygiene.

Dr. Paul R. Correll: This Committee is subsidiary to the Committee on Public Health Legislation. I am somewhat interested in its report, and think the chairman has been somewhat hampered by lack of an appropriation. I move that the report be accepted and greater consideration be given the work of this committee in the future. Motion seconded.

The Secretary: If Dr. Correll will accept as an amendment to this motion that the Board of Trustees be requested to give favorable consideration to any request from this committee for funds to carry on their work, it would facilitate matters and the question might be considered by the Board at its meeting today.

Dr. Correll: My idea is well expressed by our Secretary. I accept the amendment.

The motion as amended was then put to a vote and carried, and this paragraph of the report was on motion unanimously adopted.

The succeeding paragraphs of the report and the recommendations concerning them, up to the last paragraph, were adopted without discussion.

The paragraph containing the resolution concerning the increase in mortality of appendicitis was discussed by Drs. Henry, Miner, Culp, Behrend, Hunsberger, and Quigley.

Dr. John M. Quigley, Clearfield, moved that this matter be referred to the Board of Trustees, with power to act. Motion seconded by Dr. Henry.

Discussed by Drs. Bishop, Mengel, Henry, Miner, Phillips, and Appel, following which Dr. Quigley's motion was put to a vote and lost.

On motion regularly seconded and carried the original recommendation of the Reference Committee on Scientific Business, that this matter be referred to the Committee on Scientific Work, was put to a vote and carried.

The President: The next order of business is new business. Has any one anything to offer at this time?

Dr. J. Norman Henry introduced the following recommendations concerning minor changes in the Constitution and By-Laws:

1. That the second paragraph of Article V—House of Delegates, be changed from "If any component county medical society is without representation at the close of the roll call of the second meeting of any session of the House of Delegates, . . ." to read as follows: "If any component county medical society is without representation at the close of the roll call of any meeting of the House of Delegates, . . ."

2. That Section 2, Chapter IV—Election of Officers, be changed to read as follows: "The election of officers shall be the first order of business of the House of Delegates after the reading of the minutes on the morning of the second day of the General Session. This order of business may be postponed to a definite time and place by a two-thirds vote of those present. The President shall appoint three members as tellers, who shall count the ballots under the supervision of the Secretary. In the election of officers of this Society, the Secretary shall call the roll of the members of the House of Delegates and each member, as his name is called, shall come forward to the President's desk and deposit his ballot."

These changes to be acted upon at the next annual session.

The President: I wish to announce at this time that the Board of Trustees will meet at 1 p. m.

If there is no further business to be considered at this time, I will declare the House of Delegates of the seventy-ninth annual session adjourned.

Adjournment at 11.10 a. m.

William T. Sharpless, *President,*
Walter F. Donaldson, *Secretary,*
Christian B. Longenecker, *Asst. Secretary.*

MINUTES OF THE GENERAL MEETINGS

Tuesday, October 1, 1929

The first General Meeting was held in the Ballroom, Masonic Temple, Erie, being called to order at 10.20

a. m. by the president, Dr. Thomas G. Simonton, Pittsburgh.

THE PRESIDENT: The seventy-ninth annual session of the Medical Society of the State of Pennsylvania will please come to order. Following the invocation I will ask the audience to stand for thirty seconds in memory of the one hundred and twenty-four members who have passed to the Great Beyond since our last meeting. The invocation will be pronounced by Rev. Hugh B. Speer, Pastor of the First United Presbyterian church of Erie.

REV. HUGH B. SPEER: Our Father who art in Heaven, hallowed be thy name. Thy kingdom come, thy will be done, as in heaven so on earth. We thank Thee for our consciousness of God. Before the mountains were brought forth, or ever Thou hadst formed the earth or the world, even from everlasting to everlasting, Thou art God. We thank Thee, O God, for this body of men and women who have given themselves to this great work in the interest of humanity. We thank Thee for skill and vision, for personality and all things that are given to them and with which they are endowed because of their own industry and toil for the alleviation of human suffering. Let Thy spirit rest upon them in their deliberations in these days as they meet with each other. We pray that each and every one may receive great benefit and when they go back to their chosen fields we pray Thee it may be with gladness of soul. All this we ask in the name of Thy Son, our Redeemer. Amen.

THE PRESIDENT: The Address of Welcome on behalf of the city will be delivered by the Hon. Joseph C. Williams, Mayor of the City of Erie.

HON. JOSEPH C. WILLIAMS: Mr. President, Distinguished Visitors, Ladies and Gentlemen: We feel very proud of the place that our city holds in the history of our country, and we think we have one of the finest cities in the State of Pennsylvania. I should like to take time this morning to tell you something about it, but I realize that your time is limited. I would say, however, from personal experience, that the time of the medical profession is very valuable, and I know you will pardon me if I am very brief in my remarks and leave it to your local committee to show you what we have here in the city.

It is customary on occasions such as this that the Mayor present the keys of the city to any convention, and speaking to the Vice-President of the Erie County Medical Society the other day I was lamenting the fact that our supply of keys was exhausted and that I should not have one to present to you on this occasion. He laughed and said, "Don't worry about a little thing like that. They don't need any keys; most of them carry blanks." I suppose he meant blank keys—I did not ask him.

We do feel highly honored by your presence in our city and appreciate the opportunity to act as your host. We want to do everything in our power to make your visit here most enjoyable, and when the convention is over and you return to your homes we trust you will carry back with you fond recollections of the fine time you had in the City of Erie, and we trust this convention will go down in history as being one of the best you have ever had. To those who may be driving and are strangers in our city and not familiar with our traffic rules and regulations, if at any time during your visit you should find a pink slip on your windshield notifying you to appear at police headquarters, just notify me at City Hall and I shall be glad to see that you do not receive more than the maximum penalty for violation of the rules, which is $50 and costs and thirty days in jail.

I want to assure you, Mr. President, that it is a great privilege at this time to extend to your Society the freedom of the city, together with a very hearty welcome.

THE PRESIDENT: The address of welcome on behalf of the Erie County Medical Society will be given by Dr. Orel N. Chaffee.

DR. OREL N. CHAFFEE: Members of the State Medical Society and Guests: As President of the Erie County Medical Society, I welcome you to no mean city, for Erie is rich in history, manufacturing, and commerce; progressive in religion, education, and medicine; and beautiful in land, lake, and lovely ladies.

Ladies and gentlemen, you are now sitting in a great historic center where the first white explorer came in 1615, five years before the Pilgrim Fathers landed on Plymouth Rock. The Indians known as "Erie's" or "Cat Nation" lived here. Indian wars wiped them out.

In 1753 one hundred French families settled on Presque Isle, and the same year George Washington was sent here by Governor Dinwiddie of Virginia to notify the French to discontinue fortifying Presque Isle and Fort LeBouef, as this land was claimed as British territory.

A decade later the Indians drove out the British and ruled here for thirty years.

In 1783 England ceded this territory to the United States, and in 1795 the first town of Presque Isle was born, later named Erie.

During the war of 1812 the dashing Lieutenant Perry, 27 years of age, came to Erie, built a fleet of fighting vessels in the bay, and in a thrilling naval battle, wiped out the British fleet on September 10th. His battle flag bore the famous words of Lawrence, "Don't give up the ship." His message of victory to his superior officer was "We have met the enemy and they are ours," words that thrilled the nation.

In Erie, ladies and gentlemen, you will find monuments of Perry, and also of Gridley, famous fighter at Manila. Even in the World War, Erie was a chief center for manufacturing army shells and equipment. We are proud to have you as guests in this center of national importance.

But, ladies and gentlemen, you are also sitting in a great center of modern industrial activity. The fires of manufacturing flame here day and night. When you drive to the eastern part of the city, you will find the General Electric plant, one of the most complete of its kind in the entire nation. The modern electric locomotive is a product of this great industry. A visit to this plant is an education in itself.

In the same vicinity you may visit the Hammermill Paper Company, where the pulp of wood is converted by magic process into the finest of paper. You would delight in visiting the American Sterilizer works, which builds the modern sterilizers found in our leading hospitals, the Skinner Engine Works, with its world-known steam engine, and scores of other manufacturing plants in and about this city. As a matter of fact, Erie stands third in the nation in diversified industries. We have here the largest fresh-water fishing port in the world. In a population of 135,000, there are 24,000 employed in industry, with an industrial pay roll of $40,000,000.

But further, ladies and gentlemen, you find yourselves in a city tremendously interested in human welfare. This is a city joyous in its home life, where 48 per cent of the people own their homes. Here are to be found

78 churches, 41 schools and colleges, with an enrollment of almost 28,000 students. Two women's colleges, a branch of the University of Pittsburgh, a branch of the State Normal School, and a business college carry on their excellent educational program. An Art Club, a College Woman's Club, and a Woman's Club inspire the intellectual life of our women. Six modern hospitals, two of which are private and four public hospitals, care for the sick and injured, providing adequate medical facilities. Hamot Hospital is a modern institution, located to the north overlooking our beautiful bay; St. Vincent's Hospital to the south, commanding a bird's-eye view of the entire city. To the west is located the Shrine Hospital, caring for the crippled children of this district, and the newly constructed Municipal Hospital to the east of the city cares for the contagious diseases of this section. Parenthetically, may I add that we have the usual allotment of Abram's frauds, joint manipulators, and spinal adjustors. Take your choice and pay the price!

For lovers of golf, there are two municipal golf courses and three Country Club courses, where the white pill may be driven to its hole on the green. Sixteen parks and playgrounds invite to rest, recreation, and relaxation. Presque Isle State Park will charm you with its provisions for pleasure and its graceful winding drive.

Again, ladies and gentlemen, you are being entertained in a lovely summer resort where people delight to entertain conventions, tourists, and visitors. While here you will visit Waldameer Park, where fun, frolic, and feast await you. If you will take an hour's drive to the east, you will arrive in the land of vine-clad valleys and hills where luscious purple Concord grapes bring health and happiness. East and West the scenery on lake and land will charm you. The inexhaustible fountain of our fine water supply will cast its magnetic spell over your minds tormented by critical operations and over your spirits burdened with the secrets of suffering souls.

Amidst this environment the physicians of this city and county invite you and welcome you.

THE PRESIDENT: Probably few of the members of the State Society realize the immense amount of work that has to be done by the Scientific Program Committee each year to prepare the program for the annual session. This is really one of the most important committees because it decides the quality and character of the scientific program. This year Dr. C. Howard Marcy, of Pittsburgh, is chairman. I now have the pleasure of introducing Dr. Marcy.

DR. C. HOWARD MARCY: Mr. President and Members of the Society: The Committee on Scientific Work begs to submit the following report:

The Committee, in arranging the scientific program for this year, has attempted to provide a group of subjects which will be of interest to both the general practitioner and specialist. The program contains eighty-eight papers and forty-five case reports prepared by members of this Society. We have thirteen guest speakers, who have been invited to participate in our meetings. These men of national reputation come to us from Ann Arbor, Baltimore, Buffalo, Chicago, Cleveland, Elmira, Iowa City, New Haven, and New York City.

The papers, in general, have been grouped in symposium arrangement. In a few instances where it seemed advisable, the number of papers in a symposium has been reduced in order to permit more time for the essayist. While the individuals appearing on the program have been selected because of their ability to present something of value, we appreciate the fact that many other members of the Society whose names do not appear on the formal program are equally well qualified to discuss work in their respective fields. With this in mind we have allowed considerable time for general discussion, because after all the value in meetings such as these is the exchange of ideas and experiences. We hope, therefore, that as many as possible will enter into the discussion of the different papers to the fullest extent of the time allotted.

We also hope that members will avail themselves of the opportunity to meet personally our invited guests. These men come to us at the invitation of the Medical Society of the State of Pennsylvania, and we are honored by their presence. In no instance has a guest speaker been invited on his solicitation.

We should like to call attention to the clinics and exhibits which have been arranged by the Erie County Society. These provide a splendid opportunity for members to acquaint themselves with the excellent work which is being done in Erie.

The preparation of a scientific program is a most arduous task and requires hours of thought and work on the part of the section officers. It is to them that the credit for this program is due, and as chairman of the committee I urge that appreciation of their efforts be shown by regular attendance at the various meetings.

THE PRESIDENT: Before introducing the next speaker I should like to say a word in regard to the scientific and technical exhibits in the basement of this building. The space for technical exhibits is leased by the State Society, and the income from that source helps to defray the expenses of the annual session. The success or nonsuccess of the exhibit from the standpoint of the exhibitors is gauged by the number of signatures they can turn in to their firms when they go back. Several of them have told me that even though they do not sell a dollar's worth, if they turn in sufficient names and addresses of doctors when they go back home they are met with open arms. I hope every one of you before you leave Erie will spend a little time among these exhibits.

The announcement in regard to the Scientific Exhibit will be made by Dr. Elmer Hess, Chairman of the Scientific Exhibit.

DR. ELMER HESS: I want you all to take the time and trouble to go down stairs and see the Scientific Exhibit. I think we have the best exhibit that has ever been presented before the State Society. We have several things that are very important, and if you will bear with me I will outline the exhibits.

Both St. Vincent's and Hamot Hospitals of Erie have an exhibit. For the first time we have full-time pathologists in our hospitals, and we are accomplishing many things. Hamot has 250 beds down in the city, and St. Vincent's has an equal number up on the hill. I am sure that both institutions would be very happy and glad to have you visit them and go through the hospitals during your stay in the City of Erie. There you can see what we do, and it is better to see what we do than merely to hear about it.

The Philadelphia General Hospital, under the direction of Drs. B. P. Widmann and J. Weatherwax, are putting on an exhibit of x-ray and radium therapy. This may not interest the general practitioner quite so much as the radiologist, but it helps all to know when to refer patients to the radiologist for treatment, and what results to expect.

The Philadelphia Heart Association, under Dr. S. Calvin Smith, has a booth where you are more than welcome. Dr. Smith is one of the best known cardi-

ologists. He will be glad to talk to you, and to advise about heart clinics for your own communities.

The Warren State Hospital, under Dr. H. W. Mitchell, has an interesting exhibit. One of their charts shows that the alcoholic admissions to the hospital have been very much reduced since the enactment of the Eighteenth Amendment, and I thought that was a good argument for prohibition. But I asked Dr. Mitchell to explain, and he said they all die now before they can be taken to the hospital.

The Pennsylvania Department of Health has a marvelous exhibit. They have a booth downstairs, and also three motorized laboratories stationed in front of the Erie Y. M. C. A. building. They are for inspection by the public as well. Tell the public to go and ask questions. The Pennsylvania Department of Health is trying to help, but if you have any complaints to make, these representatives will be glad to hear and rectify them if possible.

The American Social Hygiene Association and the National Society for the Prevention of Blindness have a most interesting exhibit. It would pay you to visit them for a few minutes.

The Section on Dermatology of the State Society is conducting a clinic Wednesday morning from 9 a. m. to 1 p. m., where the differential diagnosis of the more common skin diseases will be demonstrated.

The Pennsylvania Tuberculosis Society has an exhibit, as does also the Philadelphia College of Pharmacy and Science. In the latter's booth they so display a water flea that you can see its heart working. You can also see the action of certain drugs on its living body.

Drs. B. Swayne Putts and E. G. Weibel of Erie display an excellent collection of x-ray slides and plates.

Then, for the first time, we have a motion-picture theatre, which will run a continuous program during the time of the convention. You will see the schedule in the official program. The films include obstetric subjects, fractures, and gastro-intestinal conditions. If there is any picture you wish repeated, ask the nurse in the theater for a repeat card and state thereon your preference. This is a decided step in advance for our State Society. If you see the pictures and the scientific exhibit only, they alone will repay you for the time you spend coming to Erie.

On behalf of the Committee on Scientific Work I wish to welcome you, and to express our thanks to Miss Blair for her wonderful help to us in arranging this exhibit.

THE PRESIDENT: This is the first time since 1869 that the Medical Society of the State of Pennsylvania has had the privilege of meeting in Erie, and the arrangements for the entertainment of the individual members and their families is largely due to the efforts of the members of the Erie County Medical Society. Dr. J. A. Stackhouse, Secretary of the Society, is chairman of the Local Committee on Arrangements. He will tell you of their plans.

DR. J. A. STACKHOUSE: After hearing the announcement by Dr. Marcy of the Program Committee, of the more than wonderful scientific exhibit by Dr. Hess, as well as the address of welcome of Dr. Chaffee, it seems unnecessary to present any other program to this body of scientific men. We hope to surprise you.

Tonight there will be an old-fashioned fish fry at Rainbow Gardens for the members of the Society and our exhibitors. In order to be present at this entertainment you must register and secure tickets at the registration desk in the basement of this building. At eight o'clock, at the Community Playhouse, the Community Players will present "The Queen's Husband." This entertainment is for the women visitors and members of the Woman's Auxiliary. I notice by the program that Mrs. J. A. Stackhouse is to present to the Auxiliary the program of entertainments, and before I left home she told me I was not to trespass on her domain. A word to the wise is sufficient.

Thursday at one o'clock there will be a bridge luncheon for the ladies at the Kahkwa Club. At six o'clock there will be a buffet supper given by the alumni of the University of Pennsylvania at the Erie Club. At the same hour the Jefferson alumni will meet at the Sunset Country Club as guests of the Northwestern Pennsylvania Chapter. At the same hour the Temple University Alumni will meet at the Shrine Club, and the Medico-Chi. Alumni at the Erie Yacht Club. At seven o'clock there will be a meeting for the public. A male chorus of sixty voices will sing, to be followed by an address by Dr. Arthur L. Cramp, Director of the Bureau of Investigation of the American Medical Association. This will be followed by an operatic production of the second act of Il Trovatore, and at nine-thirty the President's Reception will be held at the Hotel Lawrence. Thursday at one-thirty there will be a sightseeing tour of the city followed by a tea. We have a number of committees, as you will notice. You can ask them for anything—except money; collections have been rather slow lately. We also have a special Hospitality Committee composed of twelve handsome young doctors, several of whom are single, and some have been imported from Canada for the occasion. They are thoroughly reliable and responsible and will be glad to see that you get a ride on the lake or in an automobile, or any other hospitality we can offer. They are in charge of Dr. Usher.

If you like Eric, tell us about it and we will ask you to come again. If you do not like Erie, tell us, and we will not ask you to come again. You have now been presented with the scientific program, the exhibits, and the program of entertainment, and you can take your choice.

THE PRESIDENT: The next is the introduction of delegates from neighboring States. Dr. Harry R. Trick, of the New York State Society, was to be here today, but he has sent us the following telegram:

"Buffalo, N. Y., Sept. 30, 1929.

Dr. Walter F. Donaldson,
Sec'y. Medical Society of the State of Pennsylvania,
Erie, Pa.

I regret that a suit for malpractice against one of our members at which my presence seems to be desirable prevents me from attending your annual meeting as the delegate from the Medical Society of the State of New York. This is a great disappointment to me, but you know about duty and pleasure. Kindest regards to your outgoing and incoming presidents, and all others in authority."

We have with us today as delegate from the New Jersey State Medical Society, Dr. W. Blair Stewart, of Atlantic City.

DR. W. BLAIR STEWART, Delegate from the New Jersey State Medical Society: Mr. President, and Members of the State Society: It is a great pleasure to bring to you the greetings of the members of the Medical Society of New Jersey; also the greetings of the medical profession of Atlantic City, the world's playground, the place where all come once in a while for a good time.

The Medical Society of New Jersey has done much to improve the conditions of health in that State and I am happy to report that in the State of New Jersey we have absolutely immunized the children against that dread malady, diphtheria. You of Pennsylvania have done magnificent work in that line, and between the

work you are doing and the work we are doing these two states should, in the immediate future, ban diphtheria as we have some other diseases.

We have much in common, Mr. President. You have done magnificent work in the legislative halls of Pennsylvania, and the Medical Society of New Jersey during the past year has prevented the passage of one bill by the cults. Many more such bills have come before the Legislature, but none of them have seen the light of day; they all died in committee.

The medical profession today is confronted with serious propaganda in many states, and I fear we as a medical profession are closing our eyes to much that we consider bunk, and to many things to which we should give our attention. At present the largest propaganda is that of the tobacco industry, placing before the young men and women and the children of this country the idea of smoking cigarettes to reduce weight and to control nerves. While I do not decry absolutely the use of cigarettes, I do decry the plan these people are putting before our people, trying to persuade our young people to get into the very habit that the women of this country for fifty years prior to the World War were trying to prevent. Let us put our shoulders to the wheel to counteract some of this propaganda.

It is a pleasure to be here today. I am sorry that the President of our Association could not be with you. He wished me to extend to you, Sir, his appreciation of the work you are doing, and the hope that at some future time you and the Society of Pennsylvania may come to New Jersey and enjoy our hospitality.

THE PRESIDENT: We have with us Dr. C. J. Hollister, representing the Pennsylvania Dental Association.

DR. HOLLISTER: Mr. President and Members of the State Medical Society, and Guests: While I have the honor of being appointed by the President of the State Dental Society to represent it at your 79th annual session, I am not a practicing dentist. Allow me to tell you, however, that there are two kinds of dentists—vocal and instrumental. It is my privilege now to operate on you for a few moments, and I trust I shall not bore you as your family dentist may. Seriously, the dental profession in the last decade or a little more has rapidly advanced from an art or craft into a profession which cannot be divorced from the other branches of the healing art. When you stop to think that every person who has a pair of tonsils which may be a focus of infection also may have thirty-two points of infection in the dental apparatus, you can readily see how important it is that these two branches of the healing art should work together for the common good. And when we stop to think of the research work done by the Mayos, and their statement that a great majority of human diseases get into the body above the chin, as well as the statement by Dr. Osler that more human suffering is caused by defective teeth than by alcohol, we feel, indeed, that we belong with you in this great human service. The service which I represent is a propaganda of education looking forward to the prevention of dental disease. Some one has said that to cure is a voice from the past; to prevent is a vision of the future. I picked up a traffic journal and found these words: "If we are to lower the terrific toll of human life from automobile accidents it will only be done by education of the motoring public." That applies to matters of health, in your various branches as well as mine. The thing I want to stress is that our service in my particular branch is a service of prevention by education, and we ask that in your local communities, when we attempt to put forth some of this educational propaganda, we may have your help.

Greetings to you at this your 79th annual session from the State Dental Society.

THE PRESIDENT: We also have a representative from the Pennsylvania Pharmaceutical Association, Mr. P. Henry Utech.

MR. P. HENRY UTECH: It affords me much pleasure, Mr. President, to bring to you the greetings of the Pennsylvania Pharmaceutical Association, and may I assure you that the members of our organization, both individually and collectively, stand ready and willing at all times to render such service as will redound to the benefit of both professions, which means also the benefit of the public.

The profession of pharmacy, like that of medicine, has made wonderful strides within the past decade. Old physicians speaking cynically to one another used to say "We treat a disease of which we know little by putting into the stomach, of which we know less, a remedy of which we know nothing." But the days of empiricism in medicine as well as in pharmacy are relics of a bygone age. Few medical men have any realization of the specialized and thorough scientific training required of the modern pharmacist. They form their judgment of pharmacy, as a rule, by the erroneous conclusions that may easily be drawn from a hasty glance at the modern drug store. The qualifications of the professional ability of the pharmacist cannot always be judged by the external appearance any more than the up-to-dateness of the physician can be judged by the magazines on his waiting-room table.

The pharmacist today, the same as the up-to-date physician, has come to be a highly specialized expert in his chosen calling. He is equipped by training and experience to render special service in performing chemical tests; in preparing sterile solutions and ampules; in making cultures and vaccines and the various laboratory reagents and stains; in short, coöperating with the physician in his every effort to relieve suffering and mitigate disease. And may I add for your information that this special scientific knowledge and training is now required of all professional pharmacists.

As pharmacists—and closely related to the profession of medicine—it is not difficult to visualize the many interests we have in common, and so I am pleased to report at this time that the Public Health Committee of our Association, working in collaboration with a similar committee from your Society, rendered invaluable service in supporting the Medical Practice Act at the recent session of our Legislature. The growth of drugless cults within our State is likewise inimical to our own interests and constitute a menace to the health of our people. And speaking on this subject, Mr. President, may I assure you that such is the high aim and purpose of the Pennsylvania Pharmaceutical Association that we stand ready to coöperate in any movement or enterprise that has for its objective the protection and promotion of the public health—the weal and welfare of our people.

As has been expressed by the able chairman of your Committee on Public Relations, Dr. Wilmer Krusen, in his report, it is hoped that a series of joint meetings of physicians and pharmacists may be arranged by the various county units or groups during the coming year. Through such meetings, more cordial relations and good fellowship could be established between the members of both professions, problems of mutual interest could be discussed, legislative and narcotic questions reviewed, and mutual understandings and agreements on many local questions could be freely and frankly considered, all of which would bring about a more friendly

attitude and a keener realization of our common duty and interest as fellow servants of the community. May I, therefore, recommend that this matter be given serious consideration by your Society at this meeting.

I would also plead at this time for a more extended use by the physician of the official preparations of the U. S. P. and N. F., both of which works have the official sanction and approval of the American Medical Association. The preparations in question are all of definite therapeutic value, of known composition, are tested and standardized both chemically and physiologically, and have been selected because of their inherent qualities by a joint committee of professional physicians and pharmacists. As remedial agents they represent the best judgment and opinion of the foremost practitioners of medicine and research workers in our country. The U.S.P. as a medical text stands unequaled in the whole rêalm of medical literature. The high purpose of the book is to place in the hands of the physician a well-selected list of dependable drugs and medicaments, the proper selection of which may often determine the issue of life or death. The U.S.P. is your book intended for your guidance and information in order that the practicing physician may find his way from out the haphazard and commercialized therapeutic jungle in which he is engrossed today. It is to this work of furthering the noble aims and purposes of your profession, as ministering agents to the sick and afflicted, that we as pharmacists extend to you our whole-hearted coöperation and support at all times.

It is an honor, Mr. President, for me to bring the greetings of the Pennsylvania Pharmaceutical Association to the physicians of our Commonwealth.

THE PRESIDENT: The American Association of School Physicians is represented by one of our own members, Dr. John M. Quigley of Clearfield.

DR. JOHN M. QUIGLEY: Mr. President and Members of the Medical Society of the State of Pennsylvania: I represent and bring greetings from the youngest medical organization in America, the American Association of School Physicians. Two years ago I had the privilege of taking a part in the organization at Cincinnati of this Association as a section of the American Public Health Association. Last year at Chicago we had a full day's program, and this year at Minneapolis we have a two-days' program as a section of the A. P. H. A.

At the meeting of the Pennsylvania Public Health Association, in Altoona, I was privileged to organize the first State Chapter in America. Heretofore, in many instances, the work of the school medical inspector has been done in a very perfunctory manner, which did not do great credit to the medical profession, and the object of our Association is to bring about a higher ideal in the minds of our school medical inspectors regarding this most important work and to inspire them with a realization of the fact that they can do nothing which will redound more to the good of the people and to the honor of the medical profession than to make always a painstaking and efficient school medical inspection.

DR. FRANK C. HAMMOND, Trustee: Dr. Simonton, the Medical Society of the State of Pennsylvania has been cognizant for years of your sterling worth and of the tremendous effect of your activities in the State organization. We realize that the work you have done as chairman of the Committee on Scientific Work has established a precedent that will make it very hard for those who follow you to come up to the standard of the excellent programs you have outlined during your term of service. We appreciate, too, your interest in scientific medicine, and we value your work in organized medicine in all departments. We realize that as President-Elect and as President of this Association you have traveled the highways and byways of this Commonwealth, by day and by night, carrying the message of scientific medicine, of organized medicine, and the activities of the State Society to the county medical societies, and we know the great good that has been accomplished by these messages.

It is a delightful custom of the State Medical Society to present to the retiring president a gavel, and I, therefore, on behalf of the Board of Trustees, have the great honor and privilege to present you on this occasion with this gavel.

DR. THOMAS G. SIMONTON: Dr. Sharpless, the time has now come for me to hand over to you the emblem of authority of this State Society. A year ago you were chosen President-Elect, and from this time on, for one year, you are President of this Society. I also want to say, Dr. Sharpless, that in recognition of your valuable services as a man and as a physician, of your services to the State Society as a Trustee, the highest honor that can be bestowed by this State Society has been conferred upon you. May God bless you.

DR. WILLIAM T. SHARPLESS, President: Dr. Simonton, I thank you for your very cordial and kind words. I hope that at the end of my term I may deserve them more than I do now.

(For the President's Address, see the October number of the PENNSYLVANIA MEDICAL JOURNAL.)

Dr. Ira A. Darling, Assistant Superintendent, Warren State Hospital, Warren, read a paper entitled "Child-Guidance Clinics as Conducted in the Public Schools of Erie." This paper was discussed by Dr. J. Allen Jackson, Danville.

The first General Meeting adjourned.

THOMAS G. SIMONTON, *President,*
WILLIAM T. SHARPLESS,
President-Elect,
WALTER F. DONALDSON, *Secretary.*

Wednesday, October 2, 1929

The Wednesday morning General Meeting was called to order at ten o'clock, Dr. George E. Holtzapple of York, second vice-president, presiding.

The following case reports were presented: "Endocarditis and Pericarditis with Blood-Stream Infection of Streptococcus Viridans," by T. Palmer Tredway, Erie; "Broncho-Biliary Fistula," by Evan William Meredith, Pittsburgh; "Encephalitis Lethargica," by Frank F. D. Reckord, Harrisburg; "Addison's Disease," by Harry J. Bell, Dawson; "Complete Unilateral Diaphragmatic Hernia" (Lantern Demonstration), by Gilbert B. Meyers, Pittsburgh; "Fistula of Abdominal Wall Following an Appendiceal Abscess," by Charles G. Strickland, Erie; "Reduction of Mortality in Acute Abdominal Conditions, Especially Appendicitis" (Lantern Demonstration), John O. Bower, Philadelphia, and Jefferson H. Clark, Philadelphia.

There was no discussion of these reports.

Dr. Dean DeWitt Lewis (guest), Baltimore, read a paper entitled "The Present Status of Surgical Lesions of the Stomach." There was no discussion of this paper.

LeRoy M. A. Maeder, Philadelphia, and J. Allen Jackson, Danville, presented a paper entitled "The Physician and Mental Hygiene."

Albert J. Bruecken, Pittsburgh, read a paper entitled "Early Signs of Cancer" (Lantern Demonstration).

These papers were discussed by H. W. Mitchell, Warren; Bender Z. Cashman, Pittsburgh; Curtis C. Mechling, Pittsburgh; Theodore Diller, Pittsburgh; John B. Deaver, Philadelphia.

The Wednesday morning General Meeting adjourned.

WILLIAM T. SHARPLESS, *President,*
GEORGE E. HOLTZAPPLE,
Second Vice-President,
WALTER F. DONALDSON, *Secretary.*

Thursday, October 3, 1929

The Thursday afternoon General Meeting convened at two o'clock, the President, Dr. William T. Sharpless, presiding.

THE PRESIDENT: Before proceeding to the reading of the papers there are two groups of men to whom I think special recognition is due: First, the committee which arranged the program. I have heard a great many complimentary things said about it, and I hope that we realize that the Medical Society of this State can produce as good programs as any general medical society in the country. The second group of people is the local Committee on Arrangements. They have done so much for our comfort in the way of getting good hotels and in furnishing us with very delightful entertainment, that I feel we should be remiss if we did not recognize the excellent work of these two committees. Dr. J. A. Stackhouse, of Erie, the first vice-president, is the chairman of the Committee on Arrangements. I should like to present him.

John A. Kolmer, Philadelphia, read a paper entitled "Recent Developments in Chemotherapy." This paper was discussed by Alexander H. Colwell, Pittsburgh; Dr. George W. Raiziss, Philadelphia; and in closing by Dr. Kolmer.

Russell R. Jones, Pittsburgh, read a paper entitled "Observations on Recent Influenza Epidemic." Elmer H. Funk, Philadelphia, read a paper entitled "The Treatment of Pulmonary Suppuration" (Lantern Demonstration). Harry R. Decker, Pittsburgh, read a paper entitled "Surgical Treatment of Pulmonary Tuberculosis" (Lantern Demonstration). These papers were discussed by Alexander Armstrong, White Haven, and Ethan F. Butler, Elmira, New York.

Russell L. Cecil, New York, N. Y., read a paper entitled "Recent Advances in the Diagnosis and Treatment of Pneumonia" (Lantern Demonstration). There was no discussion of this paper.

The General Meeting adjourned.

WILLIAM T. SHARPLESS, *President,*
J. A. STACKHOUSE,
First Vice-President,
CHRISTIAN B. LONGENECKER,
Assistant Secretary.

MINUTES OF THE SECTION ON MEDICINE

Tuesday, October 1, 1929

The Section on Medicine convened in the Ballroom of the Masonic Temple, Erie, at 2.10 p. m., and was called to order by the chairman, Dr. Elliott B. Edie, Uniontown.

In the symposium on "Certain Pulmonary Conditions Important in Differential Diagnosis," 2.10 to 2.55 p. m., the following papers were read: "Spontaneous Pneumothorax," by William T. Sharpless, West Chester; "A Major Hazard in the Diagnosis of Pneumonia: Acute Massive Collapse of the Lung," by David R. Bowen, Philadelphia; "Friedländer Bacillus Pneumonia," by Karl Kornblum, Philadelphia. These papers were discussed by Milton Goldsmith, Pittsburgh; C. Howard Marcy, Pittsburgh; and I. Hope Alexander, Pittsburgh.

In the symposium on "Therapeutic Innovations," 3 to 3.55 p. m., the following papers were read: "Pilocarpin in the Treatment of Sympathicotonia," by Sloan G. Stewart, Philadelphia (by invitation); "The Therapeutic Effects of Encephalography," by William J. Gardner, Philadelphia; "The Use of Dextrose in the Regulation of Body Weight," by Christian W. Nissler and Burgess Gordon, Philadelphia; "The Therapeutic Use of the Oxygen Tent," by Leon Collins, Philadelphia (by invitation). These papers were discussed by George E. Holtzapple, York.

Francis G. Blake (guest), New Haven, Conn., addressed the Section on "Host Factors in Infection," 4 to 4.55 p. m.

The chairman expressed to Dr. Blake the thanks and appreciation of the Section for his very interesting and instructive address.

The Section adjourned at 5 p. m.

Wednesday, October 2, 1929

The Section on Medicine convened in the Ballroom of the Masonic Temple, Erie, at 2 p. m., and was called to order by the chairman, Elliott B. Edie, Uniontown.

The Executive Committee—Jesse L. Lenker, Harrisburg; William W. G. Maclachlan, Pittsburgh, and O. H. Perry Pepper, Philadelphia—recommended the following officers for the ensuing year: chairman, Charles C. Wolferth, Philadelphia; secretary, T. Palmer Tredway, Erie.

Upon motion regularly seconded and carried, Dr. Wolferth and Dr. Tredway were unanimously elected.

In the symposium on "Diabetes," 2 to 2.55 p. m., the following papers were read: "The Differential Diagnosis of Diabetes," by Leon Jonas, Philadelphia; "Complications of Diabetes," by Frank A. Evans, Pittsburgh; "The Treatment of Diabetes," by Orlando H. Petty, Philadelphia. These papers were discussed by Cortlandt W. Elkin, Pittsburgh; Henry D. Jump, Philadelphia; Leon Jonas, Philadelphia, and Orlando H. Petty, Philadelphia.

In the symposium on "Neuroses," 3 to 3.55 p. m., the following papers were read: "An Interpretation of the Functional Neuroses from the Standpoint of Internal Medicine," by Daniel J. McCarthy, Philadelphia; "Neuroses of Cardiac Origin," by William L. Long, Philadelphia; "Nervous Reactions of Giardiasis," by Baldwin L. Keyes, Philadelphia.

In the symposium on "Certain Aspects of Drug Therapy," 4 to 4.55 p. m., the following papers were read: "The Therapeutic Use of Circulatory Stimulants," by William M. Donovan and Arthur E. Davis, Scranton; "The Therapeutic Use of Habit-Forming Drugs," by Arthur B. Light, Philadelphia. These papers were discussed by James I. Johnston, Pittsburgh; Theodore Diller, Pittsburgh; Charles C. Wolferth, Philadelphia, and Arthur B. Light, Philadelphia.

The Section adjourned at 4.50 p. m.

Thursday, October 3, 1929

The Section on Medicine convened in the Ballroom of the Masonic Temple, Erie, at 9.10 a. m., and was called to order by the chairman, Elliott B. Edie, Uniontown.

The following case reports were presented, 9 to 9.55 a. m.: "Heart Block; Improvement under Barium

Chlorid," by L. Dale Johnson, Connellsville; "Psychoneurosis Simulating Chorea," by Benjamin Halporn, Uniontown; "Hypernephroma with Arterial Metastasis," by Paul G. McKelvey, Greensburg; "An Unusual Number of Cancers in One Family," by Thomas T. Sheppard, Pittsburgh; "Electrocardiogram of Dextrocardia," by August S. Kech, Altoona; "Staphylococcus Aureus Blood-Stream Infection in a Child, With Recovery," by William A. Bradshaw, Pittsburgh. These reports were discussed by William W. G. Maclachlan, Pittsburgh; Ernest W. Willetts, Pittsburgh; August S. Kech, Altoona; and Thomas T. Sheppard, Pittsburgh.

In the symposium on "The Relation of Focal Infections to Systemic Diseases," 10 to 10.55 a. m., the following papers were read: "The Relation of Focal Infections to Cardiovascular Diseases," by Howard G. Schleiter, Pittsburgh; "The Relation of Focal Infections to Gastro-intestinal Diseases," by John D. Garvin, Pittsburgh; "The Relation of Focal Infections to Pulmonary Diseases," by Richard A. Kern, Philadelphia. These papers were discussed by Ernest W. Willetts, Pittsburgh; Alex. H. Colwell, Pittsburgh; Thomas G. Simonton, Pittsburgh; and Alfred Stengel, Philadelphia.

A. N. Richards (guest), Philadelphia, addressed the Section on "Physiology of the Kidney," 11 to 11.55 a. m.

The chairman expressed to Dr. Richards the appreciation of the Section of the admirable work he has done and the excellent address he had given.

In the symposium on "Certain Aspects of Nephritis," 12 noon to 12.55 p. m., the following papers were read: "The Chemical Aspects of Nephritis," by William S. McEllroy, Pittsburgh (by invitation); "The Diagnosis of Uremia," by Alfred Stengel, Philadelphia; "Therapeutics," by James D. Heard, Pittsburgh. These papers were discussed by Roy R. Snowden, Pittsburgh; Milton Goldsmith, Pittsburgh; and William S. McEllroy, Pittsburgh.

Adjournment at 1 p. m., *sine die*.

ELLIOTT B. EDIE, *Chairman*,
CHARLES C. WOLFERTH, *Secretary*.

Members Registered in the Section on Medicine

ALLEGHENY COUNTY SOCIETY—I. H. Alexander, C. J. Bowen, W. A. Bradshaw, W. T. Burleigh, A. H. Colwell, C. L. Curll, T. Diller, C. W. W. Elkin, F. A. Evans, J. D. Garvin, S. George, L. R. Goldsmith, M. Goldsmith, Pittsburgh; H. M. Hall, Jr., Pittsburgh; J. S. Hammers, Mayview; C. C. Hartman, J. D. Heard, J. P. Hegarty, C. H. Henninger, R. T. Hood, J. M. Johnston, R. R. Jones, Pittsburgh; S. E. Lambert, Sewickley; A. L. Lewin, L. Litchfield, W. W. G. Maclachlan, E. B. McCready, Pittsburgh; S. C. McGarvey, Bridgeville; W. J. McGeary, Allison Park; C. L. McKinnon, McKees Rocks; J. M. McNall, C. B. Maits, C. H. Marcy, Pittsburgh; F. W. Mathewson, Oakdale; W. H. Mayer, G. B. Meyers, C. L. Palmer, Pittsburgh; J. Porter, McKeesport; H. G. Schleiter, T. T. Sheppard, T. G. Simonton, R. R. Snowden, Pittsburgh; H. B. Speer, Coraopolis; J. M. Thorne, D. S. Ward, M. H. Weinberg, H. C. Westervelt, C. C. Wholey, E. W. Willetts, Pittsburgh.

ARMSTRONG COUNTY SOCIETY—C. M. McLaughlin, Freeport; G. S. Morrow, Dayton; J. B. F. Wyant, Kittanning.

BEDFORD COUNTY SOCIETY—W. F. Enfield, Bedford.

BERKS COUNTY SOCIETY—A. H. Bauscher, Reading; W. W. Becker, Reading; C. F. Smith, Topton.

BLAIR COUNTY SOCIETY—A. S. Kech, D. E. Long, Altoona.

BRADFORD COUNTY SOCIETY—P. N. Barker, Troy; S. D. Conklin, Sayre; A. G. Coughlin, Athens.

BUTLER COUNTY SOCIETY—W. J. Armstrong, Butler; R. M. Christie, Conoquenessing; R. S. Lucas, M. S. Nast, H. P. St. Clair, M. B. St. Clair, Butler; L. L. Stepp, Valencia.

CAMBRIA COUNTY SOCIETY—E. T. Ealy, Barnesboro; M. W. Kuhlman, J. J. Meyer, H. W. Salus, Johnstown; T. H. A. Stites, Cresson.

CENTER COUNTY SOCIETY—H. S. Braucht, Spring Mills; P. H. Dale, State College; D. Dale, Bellefonte; J. P. Ritenour, State College.

CHESTER COUNTY SOCIETY—T. G. Aiken, Berwyn; W. H. Emery, Coatesville; J. K. Evans, Malvern; U. G. Gifford, Kennett Square; J. Scattergood, W. T. Sharpless, West Chester.

CLARION COUNTY SOCIETY—C. C. Huston, Knox; N. C. Mills, Clarion.

CLEARFIELD COUNTY SOCIETY—L. H. Davenport, Dubois; W. G. Falconer, Clearfield; I. S. Flegal, Karthaus; J. P. Frantz, G. D. Fussell, Clearfield; E. L. Jones, Philipsburg; J. M. Quigley, Clearfield.

COLUMBIA COUNTY SOCIETY—W. G. Berryhill, Orangeville.

CRAWFORD COUNTY SOCIETY—D. W. Cunningham, Meadville; C. M. Hazen, Titusville; G. E. Humphrey, Cambridge Springs; P. Rastatter, Meadville; H. H. Walker, Linesville; E. J. Werle, Meadville; C. L. Williams, Linesville.

CUMBERLAND COUNTY SOCIETY—H. C. Lawton, Camp Hill; P. W. Wagoner, Carlisle.

DAUPHIN COUNTY SOCIETY—J. W. Ellenberger, D. S. Funk, J. B. McAlister, Harrisburg; W. J. Middleton, H. C. Myers, Steelton; C. R. Phillips, F. F. D. Reckord, W. C. Sandy, Harrisburg.

DELAWARE COUNTY SOCIETY—W. E. Egbert, Chester; R. Owen, Moores; A. R. Rozploch, Chester.

ELK COUNTY SOCIETY—G. M. Hutchinson, S. G. Logan, Ridgway.

ERIE COUNTY SOCIETY—J. Ackerman, E. Armstrong, R. D. Bacon, L. C. Baldauf, G. T. Barrett, J. P. Barrett, G. Becker, L. Brecht, A. H. Bunshaw, A. C. Cameron, R. R. Dalrymple, G. S. Dickinson, J. A. Dinnison, Erie; G. S. Durbin, Fairview; H. S. Falk, I. E. Fisher, H. H. Foringer, Erie; H. A. Ghering, Edinboro; R. L. Gibbons, V. W. Graham, M. Griswold, C. C. Hammond, J. B. Howe, J. S. Irwin, P. T. Johnson, A. Kalson, Erie; C. A. Karsh, North East; C. C. Kemble, I. C. Krueger, J. C. Lawkowicz, C. H. Lefever, T. A. Little, J. H. Lloyd, H. E. Lyons, Erie; F. K. McCune, Girard; H. E. McLaughlin, R. S. Minerd, H. M. Moorhead, M. M. Mszanowski, J. J. O'Donnell, D. Palmer, P. P. Parsons, C. O. Peters, B. S. Putts, H. R. Rahner, G. A. Reed, W. H. Ronche, S. W. Reichard, J. W. Schmelter, A. M. Schrade, Erie; E. G. Shelley, North East; F. W. Shubert, J. E. Silliman, J. D. Stark, Erie; G. P. Spaulding, Albion; J. A. Stackhouse, H. R. Steadman, G. F. Stoney, G. M. Studebaker, J. H. Tate, R. W. Thompson, T. P. Tredway, F. A. Trippe, A. M. Usher, W. B. Washabaugh, E. G. Weibel, A. C. Wheeler, Erie; H. M. Wishart, North East; V. K. Worster, Waterford.

FAYETTE COUNTY SOCIETY—H. J. Bell, Dawson; E. B. Edie, Uniontown; D. C. Fosselman, Connellsville; B. Halporn, Uniontown; J. H. Hazlett, Vanderbilt; R. E. Heath, Fairchance; A. D. Hunger, Point Marion; L. D. Johnson, Connellsville; J. V. McAninch, Alicia;

C. H. Smith, Uniontown; J. D. Sturgeon, Sr., Uniontown.

HUNTINGDON COUNTY SOCIETY—J. M. Beck, J. R. St. Clair, Alexandria.

JEFFERSON COUNTY SOCIETY—H. Fugate, Helvetia; A. F. McCormick, Falls Creek.

LACKAWANNA COUNTY SOCIETY—J. J. Brennan, A. E. Davis, W. M. Donovan, C. Falkowsky, Scranton; U. P. Horger, Old Forge; J. D. Lewis, Scranton.

LANCASTER COUNTY SOCIETY—J. T. Herr, Landisville; J. E. Hostetter, Lancaster.

LAWRENCE COUNTY SOCIETY—F. W. Guy, New Castle; C. M. Iseman, Ellwood City.

LEHIGH COUNTY SOCIETY—V. J. Gangewere, R. F. Merkle, W. C. Troxell, J. J. Wenner, Allentown.

LUZERNE COUNTY SOCIETY—A. Armstrong, White Haven; G. T. Baskett, O. T. Baskett, Retreat; J. P. Janjigian, R. R. Janjigian, Forty Fort; C. H. Miner, Wilkes-Barre.

LYCOMING COUNTY SOCIETY—E. M. Bell, Allenwood; W. S. Brenholtz, G. D. Castlebury, Williamsport; G. C. Davis, Milton; H. K. Davis, Sonestown; G. R. Drick, Williamsport; E. Everett, Dushore; A. C. Haas, Williamsport; A. P. Hull, Montgomery; F. C. Lechner, Montoursville; C. A. Lehman, Williamsport; G. W. Muffly, Turbotville; C. E. Shaw, Williamsport; W. E. Turner, Montgomery.

MCKEAN COUNTY SOCIETY—L. W. Dana, Kane; F. DeCaria, Bradford; A. A. Van Slyke, Mt. Jewett.

MERCER COUNTY SOCIETY—M. A. Bailey, Jamestown; N. J. Bailey, Sharpsville; F. S. Bakewell, Greenville; P. E. Biggins, Sharpsville; J. E. Ferringer, Stoneboro; P. P. Fisher, G. W. Kennedy, Sharon; G. W. Kahle, Hadley; R. D. Nicholls, Farrell; W. W. Richardson, M. G. Yeager, Mercer.

MIFFLIN COUNTY SOCIETY—J. S. Brown, F. A. Rupp, Lewistown.

MONTGOMERY COUNTY SOCIETY—E. S. Buyers, Norristown; P. H. Corson, Plymouth Meeting; R. Fabbri, J. N. Hunsberger, Norristown; J. B. Sherbon, Pottstown.

MONTOUR COUNTY SOCIETY—J. A. Jackson, Danville.

NORTHAMPTON COUNTY SOCIETY—A. S. Fox, V. S. Messinger, T. Reichbaum, Easton; W. H. Rentzheimer, Hellertown; W. G. Tillman, Easton.

NORTHUMBERLAND COUNTY SOCIETY—E. R. Samuel, Mt. Carmel; H. D. Simmonds, Shamokin.

PHILADELPHIA COUNTY SOCIETY—E. H. Funk, S. P. Gerhard, A. L. Gillars, J. N. Henry, L. Jones, H. D. Jump, R. A. Kern, B. L. Keyes, G. A. Knowles, J. A. Kolmer, K. Kornblum, A. B. Light, W. L. Long, D. J. McCarthy, L. M. A. Maeder, A. C. Morgan, C. W. Nissler, O. Petty, C. C. Smith, I. P. Strittmatter, C. C. Wolferth, G. C. Yeager, Philadelphia.

SCHUYLKILL COUNTY SOCIETY—J. S. Carpenter, H. A. Dirschedl, Pottsville; A. B. Fleming, Tamaqua; W. R. Glenney, Pottsville; W. H. Hinkel, Tamaqua.

SOMERSET COUNTY SOCIETY—J. M. James, Hooversville; G. F. Speicher, Rockwood.

SUSQUEHANNA COUNTY SOCIETY—E. R. Gardner, Montrose.

TIOGA COUNTY SOCIETY—C. W. Sheldon, Wellsboro.

UNION COUNTY SOCIETY—A. V. Persing, Allenwood.

VENANGO COUNTY SOCIETY—F. J. Bovard, Tionesta; F. W. Brown, Franklin; C. Y. Detar, Oil City; H. F. McDowell, Franklin; J. P. Strayer, Oil City; C. M. Wilson, Franklin.

WARREN COUNTY SOCIETY—G. M. B. Bradshaw, Sugar Grove; H. C. Eaton, Warren; I. G. Hyer, Clarendon; R. H. Israel, Warren; R. B. Mervine, Sheffield; H. W. Mitchell, R. F. Otterbein, H. K. Petry, M. T. Smith, Warren.

WASHINGTON COUNTY SOCIETY—A. N. Booth, Bentleyville; C. A. Crumrine, Washington; W. R. Dickson, J. A. Douglass, W. A. LaRoss, McDonald; W. D. Martin, Washington.

WAYNE COUNTY SOCIETY—R. G. Barckley, Milford.

WESTMORELAND COUNTY SOCIETY—C. D. Ambrose, Ligonier; S. G. Henderson, Vandergrift; A. S. Kaufman, New Kensington; P. G. McKelvey, Greensburg; S. W. Nealon, Latrobe; I. J. Ober, Greensburg; E. N. Piper, New Kensington; C. B. Rugh, New Alexandria; T. St. Clair, Latrobe.

WYOMING COUNTY SOCIETY—W. W. Lazarus, Tunkhannock.

YORK COUNTY SOCIETY—C. W. Eisenhower, G. E. Holtzapple, J. C. May, P. A. Noll, C. Rea, W. H. Treible, York.

MINUTES OF THE SECTION ON SURGERY

Tuesday, October 1, 1929

The chairman of the Section on Surgery, Harvey F. Smith, Harrisburg, called the meeting to order at 2 p. m. in the Lodge Room of the Masonic Temple, Erie.

The first period, 2 to 2.55 p. m., was devoted to a symposium on "Disease of the Gall Bladder." Dr. McMeans was scheduled to read a paper, but was unavoidably absent. John F. McCullough, Pittsburgh, read a paper entitled "Cholecystography." John W. Dixon, Wilkinsburg, read a paper entitled "The Treatment of Cholecystitis." These papers were discussed by Nelson P. Davis and Bender Z. Cashman, Pittsburgh; Moses Behrend, Philadelphia; and M. C. Rumbaugh, Wilkes-Barre.

The second period, 3 to 3.55 p. m., was devoted to a symposium on "Orthopedic Surgery." J. Torrance Rugh, Philadelphia, read a paper entitled "Low Back Pain," with lantern demonstration. Carl C. Yount, Pittsburgh, read a paper entitled "The Diagnosis of Tuberculosis of the Spine." DeForest P. Willard, Philadelphia, read a paper entitled "The Diagnosis and Treatment of Postural Deformity of the Spine," with lantern demonstration. These papers were discussed by Carson Coover, Harrisburg, and Arthur G. Davis, Erie.

The third period, 4 to 4.55 p. m., was devoted to a symposium on "Carcinoma of the Uterus." The following papers were read: "Prevention of Cervical Carcinoma," by P. Brooke Bland, Philadelphia; "Early Diagnosis of Carcinoma of the Uterus," with lantern demonstration, by Charles C. Norris, Philadelphia; and "Shall Carcinoma of the Uterus be Treated by Surgery or Radiation?" with lantern demonstration, by George E. Pfahler, Philadelphia. These papers were discussed by Frank C. Hammond, Philadelphia.

The attendance at this session was about 200.

The Section adjourned at 5.10 p. m.

Wednesday, October 2, 1929

The chairman, Harvey F. Smith, Harrisburg, called the meeting to order at 2 p. m., in the Lodge Room of the Masonic Temple.

The whole period, 2 to 5 p. m., was devoted to a symposium on "Prostatism," this being a joint meeting of the Sections on Surgery and Urology. The following papers were read: "Gross Pathology of Prostatic Obstruction," with lantern demonstration, by Alexander Randall, Philadelphia; "The Prostatic Patient as the General Surgeon Sees Him," by Frank R. Bailey, Pittsburgh; "Preparation and Determination of the Qualifications of the Patient for Operation," by Edward J. McCague, Pittsburgh; "Prostatism. Palliative or Operative Treatment?" by Walter Estell Lee and Frederick S. Schofield, Philadelphia (This paper was read by Dr. Schofield); "Prostatectomy. Choice of Operation, Technic, and Results," by Theodore Baker, Pittsburgh; "Problems in the Treatment of Prostatic Obstruction," with lantern demonstration, by William E. Lower (guest), Cleveland; "The Prospects of the Prostatic," by Edward L. Keyes (guest), New York, N. Y. These papers were discussed by John B. Deaver, Philadelphia; Gideon Timberlake (visitor), St. Petersburg, Florida; Donald Guthrie, Sayre; Emory G. Alexander, Philadelphia; Thomas C. Stellwagen, Philadelphia; and in closing by Alexander Randall, Philadelphia.

The attendance at this session was 250.

The meeting adjourned at 5.15 p. m.

Thursday, October 3, 1929

The chairman, Harvey F. Smith, Harrisburg, called the meeting to order at 9 a. m. in the Lodge Room of the Masonic Temple.

The first period of the third session, 9 to 9.55 a. m., was devoted to case reports, as follows: "Perirectal Abscess Due to Gas Bacillus," by John A. Campbell, Williamsport; "Dysphagia Due to Hyoid Spurs," by E. F. Butler, Elmira; "Delivery by Laparotomy of a Seven-Months' Living Child Two Years and Nine Months After a Subtotal Hysterectomy and a Right Salpingo-oöphorectomy," by Raymond J. Bower, Williamsport; "Perianal Urinary Fistula," with lantern demonstration, by F. S. Mainzer, Clearfield; "Two Cases of Pathologic Perforation of the Gall Bladder," by Marshall C. Rumbaugh, Kingston; "Osteo-enchondroma—Multiple," with lantern demonstration, by Charles C. Crouse, Greensburg; "Gangrene of an Undescended Testicle from Torsion of the Cord," by Nelson P. Davis, Pittsburgh; "Rupture of the Liver with Subdiaphragmatic Hemorrhage," by George B. Stull, Harrisburg.

The Executive Committee reported that the following officers were nominated to serve for the ensuing year: chairman, Damon B. Pfeiffer, Philadelphia; secretary, Samuel P. Mengel, Wilkes-Barre. Upon motion, duly seconded and carried, Drs. Pfeiffer and Mengel were unanimously elected.

The second period, 10 to 10.55 a. m., was devoted to a symposium on the "Surgical Patient." Grover C. Weil, Pittsburgh, read a paper entitled "The Surgical Management of Acute Traumatic Major Cases." George P. Muller, Philadelphia, read a paper entitled "The Surgical Care of the Patient with Neglected Acute Abdominal Disease," with lantern demonstration. Samuel J. Waterworth, Clearfield, read a paper entitled "The Treatment of the Patient Before, During, and After the Operation." These papers were discussed by John B. Lowman, Johnstown.

The third period, 11 to 11.55 a. m., was devoted to a symposium on "Head Injuries." A paper entitled "Head Injuries from the Neurologist's Standpoint" was read by George J. Wright, Pittsburgh. A paper was read by Charles H. Frazier, Philadelphia, entitled "The Surgical Management of Cerebral Trauma," with lantern demonstration. These papers were discussed by John B. Lowman, Johnstown; Charles H. Henninger, Pittsburgh; and Clarence J. McCullough, Washington.

The fourth period, 12 to 12.55 p. m., was devoted to a paper on "Suppurative Lesions of the Lungs," with lantern demonstration, by Arthur M. Shipley (guest), Baltimore, Md. This paper was not discussed, but was favorably received.

The attendance was about 150.

The Section adjourned at 12.55 p. m.

HARVEY F. SMITH, *Chairman,*
H. H. DONALDSON, *Secretary.*

Members Registered in the Section on Surgery

ALLEGHENY COUNTY SOCIETY—H. S. Arthur, McKeesport; F. R. Bailey, C. A. Bicking, C. F. Boucek, C. M. Boucek, Pittsburgh; G. S. Bubb, Coraopolis; A. J. Buka, B. Z. Cashman, S. A. Chalfant, Pittsburgh; E. W. Cross, Tarentum; N. P. Davis, H. R. Decker, Pittsburgh; J. W. Dixon, Wilkinsburg; H. H. Donaldson, Pittsburgh; C. G. Eicher, McKees Rocks; T. Evans, Jr., Pittsburgh; A. H. Gross, Bellevue; G. L. Hays, M. R. Hoon, Pittsburgh; John A. Huth, Natrona; E. W. Jew, D. B. Ludwig, J. F. McCullough, H. E. McGuire, W. B. McKenna, J. L. Martin, D. B. Martinez, Pittsburgh; H. H. Meanor, Coraopolis; C. C. Mechling, E. W. Meredith, E. S. Montgomery, Pittsburgh; C. K. Shanor, Sewickley; M. A. Slocum, Pittsburgh; W. J. K. Snyder, Avalon; P. B. Steele, G. C. Weil, G. J. Wright, C. C. Yount, Pittsburgh.

BEAVER COUNTY SOCIETY—I. C. Duncan, Beaver Falls; C. B. Forcey, Ambridge; B. C. Painter, New Brighton; T. P. Simpson, Beaver Falls; J. H. Wilson, Beaver.

BEDFORD COUNTY SOCIETY—W. H. Brennen, Meadville.

BERKS COUNTY SOCIETY—W. D. Griesemer, C. B. Rentschler, Reading.

BLAIR COUNTY SOCIETY—H. F. Moffitt, Altoona; E. B. Murchison, Tyrone.

BRADFORD COUNTY SOCIETY—E. F. Butler, Elmira, N. Y.; D. Guthrie, Sayre.

BUCKS COUNTY SOCIETY—J. F. Wagner, Bristol.

BUTLER COUNTY SOCIETY—C. B. Mather, R. W. Walker, Butler; A. E. Whittaker, Zelienople.

CAMBRIA COUNTY SOCIETY—W. O. Lubken, J. B. Lowman, Johnstown; E. Pardoe, South Fork; C. H. Schultz, J. L. Sagerson, Johnstown.

CLARION COUNTY SOCIETY—P. R. Lecklitner, Rimersburg.

CLEARFIELD COUNTY SOCIETY—E. E. Houck, Dubois; A. C. Lynn, Philipsburg; F. S. Mainzer, S. J. Waterworth, W. O. Wilson, Clearfield.

CLINTON COUNTY SOCIETY—G. D. Mervine, T. E. Teah, D. W. Thomas, Lock Haven.

CRAWFORD COUNTY SOCIETY—J. F. Connor, R. B. Gamble, G. E. Hayward, Meadville; L. J. King, Conneautville; H. C. Winslow, Meadville.

DAUPHIN COUNTY SOCIETY—C. Coover, G. L. Laverty, E. A. Nicodemus, G. B. Stull, H. F. Smith, Harrisburg.

ELK COUNTY SOCIETY—A. C. Luhr, St. Marys.

ERIE COUNTY SOCIETY—W. G. Allen, F. E. Bowser, G. C. Boughton, P. Barkey, O. N. Chaffee, A. G. Davis, Erie; J. C. Douville, North East; H. A. Dunn, F. Eastman, C. W. Fortune, Erie; N. T. Gillette, Corry;

B. Goldman, J. R. Hart, F. B. Krimmel, L. A. Lasher, R. H. Luke, C. H. McCallum, F. P. McCarthy, C. A. McNeil, P. G. Mainzer, A. B. Miller, U. H. Meyers, J. E. O'Brien, G. S. Ray, D. V. Reinoehl, O. W. Renz, A. H. Roth, J. W. Schilling, S. L. Scibetta, C. G. Strickland, J. G. Strimple, W. G. Stroble, J. W. Switzer, F. W. Underhill, F. A. Walsh, Erie.

Fayette County Society—C. W. Conn, A. E. Crow, R. H. Jeffrey, Uniontown; V. P. Pisula, Everson.

Huntingdon County Society—C. G. Brumbaugh, Huntingdon; R. R. Decker, Lewistown; H. C. Frontz, Huntingdon.

Indiana County Society—G. E. Simpson, Indiana.

Jefferson County Society—E. W. Jaquish, Punxsutawney.

Lackawanna County Society—H. W. Albertson, Scranton; T. P. Martin, Carbondale; F. M. Pugliese, C. E. Thomson, Jr., Scranton.

Lancaster County Society—T. B. Appel, Lancaster; J. D. Denney, Columbia; S. G. Pontius, Lancaster; R. Reeser, Columbia.

Lawrence County Society—J. Foster, New Castle; H. E. Helling, Ellwood City; J. P. Prioletti, E. U. Snyder, New Castle.

Lehigh County Society—C. R. Fox, Northampton; H. E. Guth, Orefield; C. H. Muschlitz, Slatington; R. L. Schaeffer, Allentown.

Luzerne County Society—A. C. Brooks, H. A. Fischer, H. B. Gibby, J. Howorth, L. C. Mundy, S. P. Mengel, Wilkes-Barre; M. C. Rumbaugh, Kingston.

Lycoming County Society—R. J. Bower, J. A. Campbell, Williamsport; J. F. Gordner, Montgomery; A. F. Hardt, Williamsport; R. B. Hayes, Jersey Shore; L. M. Knauber, L. E. Wurster, C. L. Youngman, Williamsport.

McKean County Society—E. O. Kane, E. N. Larsen, W. B. Mosser, G. S. Vogan, Kane.

Mercer County Society—P. T. Hope, Mercer; A. M. O'Brien, Sharon; D. E. Vogan, Mercer.

Mifflin County Society—C. J. Stambaugh, Reedsville.

Montgomery County Society—J. E. Gotwals, Phœnixville.

Northampton County Society—J. A. Betts, P. Correll, Easton; W. L. Estes, Jr., D. K. Santee, D. P. Walker, Bethlehem.

Northumberland County Society—G. W. Reese, Shamokin.

Philadelphia County Society—E. G. Alexander, E. W. Beach, M. Behrend, P. B. Bland, J. O. Bower, J. B. Deaver, C. H. Frazier, F. C. Hammond, W. E. Lee, C. B. Longenecker, G. P. Muller, C. C. Norris, D. B. Pfeiffer, J. T. Rugh, D. P. Willard, Philadelphia.

Schuylkill County Society—M. C. Householder, Pottsville; G. O. O. Santee, Cressona; E. E. Shifferstine, Coaldale.

Tioga County Society—L. G. Cole, Blossburg.

Venango County Society—F. M. Summerville, J. C. Wilkins, Oil City.

Warren County Society—W. M. Robertson, Warren.

Washington County Society—J. H. Corwin, Washington; C. L. Harsha, Canonsburg; W. J. L. McCullough, H. P. Prowitt, Washington.

Westmoreland County Society—C. C. Crouse, Greensburg; R. C. Johnston, New Kensington; R. E. L. McCormick, Irwin.

MINUTES OF THE SECTION ON EYE, EAR, NOSE, AND THROAT DISEASES

Tuesday, October 1, 1929

The Tuesday afternoon session of the Section on Eye, Ear, Nose, and Throat Diseases convened at 2.10 in St. Paul's Chapter House, Erie, Pa., the chairman, Curtis C. Eves of Philadelphia, presiding.

C. Ford Heard, Erie, read a paper entitled "Chronic Infection of the Sphenoid Sinus." This paper was discussed by George B. Jobson, Franklin; Fred Fisher, Erie; John J. Sullivan, Scranton; and in closing by Dr. Heard.

John J. Sullivan, Scranton, read a paper entitled "Thrombosis of the Lateral and Cavernous Sinuses." This paper was discussed by Frederick J. Bishop, Scranton; John F. Culp, Harrisburg; C. Ford Heard, Erie; A. Spencer Kaufman, Philadelphia; James A. M. Russell, Erie; and in closing by Dr. Sullivan.

Samuel Cohen, Philadelphia, read a paper entitled "Plastic Surgery of the Nose" (Motion-Picture Demonstration). This was discussed by John J. Sullivan, Scranton.

Edward W. Beach, Philadelphia, read a paper entitled "Ether Anesthesia in Otolaryngologic Cases."

John H. Evans (guest), Buffalo, N. Y., read a paper entitled "Nitrous-Oxid-Oxygen Anesthesia in Tonsillectomy" (Motion Picture Demonstration).

These two papers were discussed by C. M. Brown (guest), Buffalo, N. Y.

On motion of Nelson Weinberger, Sayre, seconded by Fred Fisher, Erie, a rising vote of thanks was tendered Drs. Evans and Brown for their presentation.

The Tuesday afternoon session adjourned.

Wednesday, October 2, 1929

The Wednesday afternoon session convened at two o'clock, the chairman, Curtis C. Eves of Philadelphia, presiding.

It was moved by John F. Culp, of Harrisburg, that a committee of three be appointed by the Chair to draw up resolutions of respect concerning deceased members, a copy of such resolutions to be sent to the families of the deceased. Motion seconded by Edward B. Heckel and carried. The chairman appointed on this committee John F. Culp, Nelson Weinberger, and Reid Nebinger.

Hunter W. Scarlett, Philadelphia, read a paper entitled "Chronic Uveitis." This paper was discussed by J. DeWitt Jackson, Erie; David N. Dennis, Erie; Merwyn M. Williams, Scranton; James G. Koshland, Lewistown; and in closing by Dr. Scarlett.

Alvin A. Schlegel, Pittsburgh, read a paper entitled "Acute Eye Injuries." This paper was discussed by Edward B. Heckel, Pittsburgh; J. Craig McAllister, Ridgway; Leighton F. Appleman, Philadelphia; John B. McMurray, Washington; G. William Schlindwein, Erie; John V. Foster, State College; Harvey E. Thorpe, Pittsburgh; and in closing by Dr. Schlegel.

Clarence J. McCullough, Washington, read a paper entitled "The Importance of Visual-Field Studies Following Head Injuries" (Lantern Demonstration). This paper was discussed by John B. McMurray, Washington; and Harvey E. Thorpe, Pittsburgh.

Charles P. Small (guest), Chicago, read a paper entitled "The Routine Examination of the Eyes." There was no discussion of this paper.

It was moved by Edward B. Heckel that a rising vote of thanks be extended to Dr. Small for his presentation. Motion carried.

The Wednesday afternoon session adjourned.

Thursday, October 3, 1929

The Thursday morning session convened at nine o'clock, the chairman, Curtis C. Eves of Philadelphia, presiding.

The special committee on resolutions reported as follows:

WHEREAS, An all-wise Providence has taken from our midst Dr. William Hardin Sears, Dr. S. MacCuen Smith, Dr. Lewis H. Taylor, Dr. Thomas H. Fenton, Dr. Frederick B. Harding, Dr. Charles S. Rebuck, Dr. B. M. Dickinson, and Dr. Bertram A. Beale; and

WHEREAS, We, the members of the Medical Society of the State of Pennsylvania, and of the Section on Eye, Ear, Nose, and Throat Diseases in particular, extend our deep sympathy to the bereaved families of our late fellow members; therefore, be it

Resolved, That we stand with bowed heads in silent token of honor and esteem for the deceased; and be it further

Resolved, That this resolution be spread upon the minutes of this Society, and that the Secretary forward a copy of same to the bereaved.

JOHN F. CULP,
NELSON S. WEINBERGER,
REID NEBINGER.

This resolution was approved.

James A. Babbitt, Philadelphia, read a paper entitled "The Middle Ear and Its Problems" (Lantern Demonstration). This paper was discussed by William J. Gardner, Philadelphia, from the standpoint of vascular anatomy and its complications (by invitation); by Louis Fisher, Philadelphia, from the standpoint of vertigo; and by George M. Coates, Philadelphia; Matthew S. Ersner, Philadelphia; James A. M. Russell, Erie; and in closing by Dr. Babbitt.

The Executive Committee reported the following nominations for officers for the coming year: chairman, Hunter H. Turner, Pittsburgh; secretary, Reid Nebinger, Danville. On proper motion these men were declared elected.

Louis H. Clerf, Philadelphia, read a paper entitled "Cancer of the Larynx." This paper was discussed by Robert M. Lukens, Philadelphia; Robert F. Ridpath, Philadelphia; James A. Babbitt, Philadelphia; Frederick J. Bishop, Scranton; and in closing by Dr. Clerf.

The following case reports were presented: "Ophthalmic Migraine," by Warren S. Reese, Philadelphia; "Congenital Coloboma of the Optic Disk in a Twelve-year-old Child"; also a case of "Bilateral Complete Congenital Auridia," by G. William Schlindwein, Erie; "Traumatic Paralysis of Left Internal Rectus from Sword Wound," by J. DeWitt Jackson, Erie; "Laryngeal Vertigo," by J. Frederick Bishop, Scranton; "Chronic Empyema of Antrum Simulating Sarcoma," by Charles R. Hughes, Philadelphia.

The above reports were discussed by Owen M. Shreve, Erie; Louis H. Clerf, Philadelphia; and Thomas R. Currie, Philadelphia.

The Section adjourned at five p. m.

Members Registered in the Eye, Ear, Nose, and Throat Section

ALLEGHENY COUNTY SOCIETY—J. C. Anderson, Pittsburgh; L. L. Cooper, Crafton; K. M. Day, L. C. Fulton, E. B. Heckel, G. C. Kneedler, Pittsburgh; C. A. Lauffer, Wilkinsburg; T. B. McCollough, J. C. Markel, G. J. McKee, Pittsburgh; C. S. Orris, Tarentum; Isadore Pachtman, N. J. Resmer, A. A. Schlegel, G. H. Shuman, H. E. Thorpe, H. H. Turner, E. E. Wible, Pittsburgh; C. H. Wolfe, Ambridge.

ARMSTRONG COUNTY SOCIETY—E. L. Fleming, Indiana.

BERKS COUNTY SOCIETY—S. L. Rhode, Reading.

BLAIR COUNTY SOCIETY—S. P. Glover, Altoona; J. W. Hershberger, Martinsburg.

BRADFORD COUNTY SOCIETY—N. S. Weinberger, Sayre.

BUCKS COUNTY SOCIETY—J. A. Weierbach, Quakertown.

BUTLER COUNTY SOCIETY—L. R. Hazlett, Butler.

CAMBRIA COUNTY SOCIETY—O. G. A. Barker, Johnstown.

CENTER COUNTY SOCIETY—J. V. Foster, State College.

CLEARFIELD COUNTY SOCIETY—H. C. Hughes, J. M. Tyson, Dubois.

CRAWFORD COUNTY SOCIETY—C. Cooper, Titusville; M. T. Leary, W. W. Shaffer, Meadville.

DAUPHIN COUNTY SOCIETY—J. F. Culp, Harrisburg; H. W. George, Middletown; J. W. Shaffer, Harrisburg.

DELAWARE COUNTY SOCIETY—C. I. Stiteler, Chester.

ELK COUNTY SOCIETY—J. C. McAllister, Ridgway.

ERIE COUNTY SOCIETY—G. H. Clapp, R. W. Cooney, J. H. Delaney, D. N. Dennis, F. Fisher, Jr., J. H. Fust, C. F. Heard, J. D. Jackson, Erie; R. V. Jones, Oil City; K. Law-Wright, J. A. M. Russell, G. W. Schlindwein, O. M. Shreve, A. L. Smith, Erie.

FAYETTE COUNTY SOCIETY—D. E. Lowe, Uniontown.

INDIANA COUNTY SOCIETY—H. B. Buterbaugh, Indiana.

JEFFERSON COUNTY SOCIETY—C. W. Beals, Dubois.

LACKAWANNA COUNTY SOCIETY—F. J. Bishop, J. P. Donahoe, C. D. Miller, L. G. Redding, J. J. Sullivan, Jr., M. M. Williams, Scranton.

LANCASTER COUNTY SOCIETY—T. C. Shookers, Lancaster.

LAWRENCE COUNTY SOCIETY—A. W. Shewman, C. E. Trainor, New Castle.

LEBANON COUNTY SOCIETY—J. J. Light, Lebanon.

LUZERNE COUNTY SOCIETY—L. T. Buckman, O. F. Kistler, W. C. Marsden, Wilkes-Barre.

LYCOMING COUNTY SOCIETY—J. C. Brown, P. H. Decker, Williamsport; L. M. Goodman, Jersey Shore; W. F. Kunkle, Williamsport.

MERCER COUNTY SOCIETY—C. E. Bailey, Sharon; B. A. Black, Grove City; L. N. Breene, Sharon.

MIFFLIN COUNTY SOCIETY—J. G. Koshland, Lewistown.

MONTOUR COUNTY SOCIETY—R. Nebinger, Danville.

NORTHAMPTON COUNTY SOCIETY—P. H. Kleinhans, Bethlehem.

PHILADELPHIA COUNTY SOCIETY—W. H. Annesley, L. F. Appleman, L. H. Clerf, G. M. Coates, S. Cohen, J. W. Croskey, T. R. Currie, M. S. Ersner, C. E. Eves, L. Fisher, C. R. Hughes, A. S. Kaufman, R. M. Lukens, W. S. Reese, R. F. Ridpath, H. W. Scarlett, Philadelphia.

SCHUYLKILL COUNTY SOCIETY—T. L. Williams, Mt. Carmel.

SOMERSET COUNTY SOCIETY—R. Heffley, Berlin.

TIOGA COUNTY SOCIETY—H. G. Meaker, Tioga; W. F. White, Wellsboro.

VENANGO COUNTY SOCIETY—H. B. Gaynor, Polk; J. B. Jobson, Franklin; F. E. Magee, Oil City.

WARREN COUNTY SOCIETY—M. V. Ball, Warren.

WASHINGTON COUNTY SOCIETY—C. J. McCullough, J. B. McMurray, C. E. Tibbons, Washington.

WESTMORELAND COUNTY SOCIETY—J. G. Alter, New Kensington.

YORK COUNTY SOCIETY—C. L. Fackler, J. F. Klinedinst, York.

MINUTES OF THE SECTION ON PEDIATRICS

Tuesday, October 1, 1929

The Section on Pediatrics convened in the Third Floor Solarium of the Hamot Hospital, Erie, Pa., at 2.15 p. m., and was called to order by the chairman, John F. Sinclair, Philadelphia.

The first period, from 2.15 to 3.20 p. m., was allotted to a clinic, the case presentations being as follows: "Congenital Anomaly of the Spinal Cord," by H. E. Spaulding; "Congenital Heart With Dextrocardia," by F. E. Ross; "Congenital Abdominal Mass in Three-Year-Old Boy," by N. D. Gannon; "Peribronchial Infiltration With Resolution," by G. B. Emerson; and "Meningocele With Paralysis," by N. D. Gannon. A number of x-ray films were shown in connection with these cases.

There was no discussion, but a great number of those present went forward and examined the subjects produced—three small children and one girl aged twelve years.

The second period, from 3.30 to 4.55 p. m., was taken up with papers, the following subjects having been presented: "The Common Cold in Infancy and Childhood," by Gibson Smith, York; "Tuberculin in Diagnosis and Treatment in Children" (A Method for Measuring the Degree of Hypersensitiveness to Both the Endotoxin and the Exotoxin of the Tubercle Bacillus and for Determining the Appropriate Therapeutic Dose of Each in the Individual Case), by Myer Solis-Cohen, Philadelphia; "Enuresis," by Robert K. Rewalt, Williamsport.

The time allotted for discussion which followed was occupied by Myer Solis-Cohen, Philadelphia; J. H. McKee, Philadelphia; Robert K. Rewalt, Williamsport; Francis B. Jacobs, West Chester; and Harry Lowenburg, Philadelphia.

The attendance at this meeting was 53.

The Section adjourned at 4.55 p. m.

Wednesday, October 2, 1929

The Section on Pediatrics convened at 2 p. m. in rooms 2-3-4, St. Paul's Chapter House, 132 West Seventh Street, Erie, Pa., being called to order by the chairman, Dr. Sinclair.

The first period, from 2 to 2.55 p. m., was devoted to a symposium on the "Cause of Death in the Newborn," during which the following papers were read: "A Clinical and Autopsy Study of 165 Newborn Infants," by Ralph M. Tyson, Philadelphia; and "The Postmortem Pathology of the Newborn," by Frank W. Konzelmann, Philadelphia, Associate. Both these papers were illustrated with lantern slides.

The second period, from 3 to 3.55 p. m., was devoted to a symposium on the "Thymus," during which the following papers were read: "The Thymic Syndrome," by Arthur M. Dannenberg, Philadelphia; "The Roentgen Diagnosis and Treatment of Enlargement of the Thymus," by Eugene P. Pendergrass; and "Conditions Simulating Thymus Disease and their Diagnosis," by John M. Higgins, Sayre. These papers were illustrated with lantern slides, with the exception of Dr. Higgins's paper.

The time allotted for discussion was occupied by John M. Higgins, Sayre; Harry Lowenburg, Philadelphia; Robert K. Rewalt, Williamsport; J. H. McKee, Philadelphia; Francis B. Jacobs, West Chester; Ralph M. Tyson, Philadelphia; Henry T. Price, Pittsburgh; J. Gibson Logue, Williamsport; and closed by Drs. Dannenberg and Pendergrass.

Following a brief recess, the following paper was given: "The Care and Feeding of Premature Infants," by Julius H. Hess (guest), Chicago, Ill.

A rising vote of thanks was given Dr. Hess.

Dr. Ross reported for the Executive Committee as follows: chairman, J. Gibson Logue, Williamsport; secretary, Norbert D. Gannon, Erie.

There being no other nominations, the above were unanimously elected, upon motion made by Ralph M. Tyson and seconded by Robert K. Rewalt.

The following committee was appointed to draw up suitable resolutions in memory of the late Dr. Z. R. Scott of Pittsburgh: Henry T. Price, Pittsburgh; F. E. Ross, Erie; and J. Gibson Logue, Williamsport.

The attendance at this meeting was 56.

The Section adjourned at 5 p. m.

Thursday, October 3, 1929

The Section on Pediatrics convened at 9.05 a. m. in Rooms 2-3-4, St. Paul's Chapter House, 132 West Seventh Street, Erie, Pa., being called to order by the chairman, Dr. Sinclair.

The first period, from 9.05 to 9.55 a. m., was devoted to a symposium on "Anemia in Infancy and Childhood," during which the following papers were read: "The Normal Blood," by Henry T. Price, Pittsburgh, Principal; "Secondary Anemia," by D. Hartin Boyd, Pittsburgh; "Severe Anemia," with lantern demonstration, by Ernest G. Kuhlman, Pittsburgh; and "Transfusion as a Remedial Measure," by E. R. McCluskey, Pittsburgh.

J. Gibson Logue, of Williamsport, discussed these papers.

The second period, from 10 to 10.55 a. m., was devoted to case reports. The following were given: "Acute Nonsuppurative Inflammation of the Hip Joint," by J. Fred Wagner, Bristol; "Increased Intracranial Pressure in a Nine-Year-Old Boy," by Thomas H. Weaber, Allentown; "Ascaridiasis Simulating Appendicitis," by George W. Overholser, Reading, with lantern slides; "Progeria," by Vincent T. Curtin, Philadelphia, with lantern slides.

Drs. Martin W. Brossman, of Allentown, Alvin E. Siegel, of Philadelphia, H. A. Blair, of Curwensville, and J. L. McCracken, of Smithfield, failed to appear to present their case reports.

The time allotted for discussion was occupied by J. Gibson Logue, Williamsport; Alexander Margolies, Philadelphia; George W. Overholser, Reading; John F. Sinclair, Philadelphia; and Vincent T. Curtin, Philadelphia.

The third period, from 11 to 11.55 a. m., was devoted to a symposium on "Encephalitis," the following papers being presented: "The Brain Changes in the Acute Infections of Childhood. A Clinicopathologic Study," with lantern demonstration, by Nathaniel W. Winkelman, Philadelphia, Principal; and "Clinical Evidences of Encephalitis in the Acute Infections of Childhood," with lantern demonstration, by Joseph Stokes, Jr., Germantown, Associate.

The time allotted for discussion was occupied by the following: Max H. Weinberg, Pittsburgh; J. Gibson Logue, Williamsport; Francis T. O'Donnell, Wilkes-Barre; E. G. Kuhlman, Pittsburgh; and discussion was closed by Drs. Winkelman and Stokes.

The final period was devoted to "Congenital Syphilis," with lantern demonstration, by Dr. P. C. Jeans (guest), Iowa City, Iowa. A rising vote of thanks was given Dr. Jeans.

The attendance at this meeting was 31.

The Section adjourned at 1 p. m.

JOHN F. SINCLAIR, *Chairman,*
J. GIBSON LOGUE, *Secretary.*

Members Registered in the Section on Pediatrics

ALLEGHENY COUNTY SOCIETY—D. H. Boyd, Pittsburgh; V. W. Cowan, McKeesport; H. J. Goodrich, McKees Rocks; J. W. Ildza, B. J. McCormick, H. T. Price, Pittsburgh.

BERKS COUNTY SOCIETY—G. W. Overholser, Reading.

BRADFORD COUNTY SOCIETY—J. M. Higgins, Sayre; P. H. Schwartz, Towanda.

BUCKS COUNTY SOCIETY—W. G. Moyer, Quakertown.

BUTLER COUNTY SOCIETY—A. I. Stewart, Harmony.

CHESTER COUNTY SOCIETY—F. B. Jacobs, West Chester; M. Margolies, Coatesville.

DAUPHIN COUNTY SOCIETY—J. R. Plank, Steelton.

DELAWARE COUNTY SOCIETY—E. A. Whitney, Elwyn.

ERIE COUNTY SOCIETY—H. B. Emerson, N. D. Gannon, R. A. Kern, R. O. Miller, F. E. Ross, Erie; J. F. Rutherford, Hastings; H. E. Spaulding, Erie.

FAYETTE COUNTY SOCIETY—J. D. Sturgeon, Jr., Uniontown.

LANCASTER COUNTY SOCIETY—W. J. Leaman, Lancaster.

LEHIGH COUNTY SOCIETY—T. H. Weaber, Allentown.

LUZERNE COUNTY SOCIETY—E. L. Meyers, F. T. O'Donnell, Wilkes-Barre.

LYCOMING COUNTY SOCIETY—J. G. Logue, R. K. Rewalt, Williamsport.

MCKEAN COUNTY SOCIETY—P. S. Robbins, Bradford.

MERCER COUNTY SOCIETY—E. L. Lewis, Grove City; D. Phythyon, Sharon.

MONTGOMERY COUNTY SOCIETY—H. A. Bostock, Norristown; J. K. W. Wood, Willow Grove.

PHILADELPHIA COUNTY SOCIETY—W. P. Brown, A. M. Dannenberg, H. W. Goos, F .W. Konzelmann, H. Lowenberg, J. H. McKee, E. P. Pendergrass, J. F. Sinclair, M. Solis-Cohen, N. W. Winkelman, Philadelphia.

VENANGO COUNTY SOCIETY—A. M. Brown, Franklin; M. A. McKee, W. K. Mount, Oil City; H. M. Watkins, Polk.

WARREN COUNTY SOCIETY—E. S. Briggs, R. H. Knapp, C. W. Schmehl, Warren.

YORK COUNTY SOCIETY—G. Smith, York.

MINUTES OF THE SECTION ON DERMATOLOGY

Tuesday, October 1, 1929

The Section on Dermatology convened in the Guild Room of St. Paul's Chapter House, Erie, Pa., at 2 p. m., the chairman, Lester Hollander, Pittsburgh, presiding.

In the first period, 2 to 2.55 p. m., the following papers were read: "The Skin in Tuberculosis," by Frank C. Knowles and John B. Ludy, Philadelphia; "Diagnosis and Treatment of the Pyodermias," by William H. Guy, Pittsburgh; and "Nevi" by Joseph V. Klauder, Philadelphia.

The discussion was opened by Fred D. Weidman, Llanerch.

In the second period, 3 to 3.55 p. m., "The Rigidity of Cutaneous Diagnostic Criteria" was presented by Udo J. Wile (guest), Ann Arbor, Michigan.

In the third period, 4 to 4.55 p. m., "Physiotherapy in Diseases of the Skin" was presented by Carroll S. Wright, Philadelphia; "Differential Diagnosis of Bullous Diseases," by Abram Strauss, Philadelphia; and "The Cutaneous Manifestations of Systemic Disorders," by Frederick Amshel, Pittsburgh.

The discussion was opened by Udo J. Wile, of Ann Arbor, Michigan, followed by W. H. Guy, of Pittsburgh, C. S. Wright, of Philadelphia, Fred W. Weidman, of Llanerch, J. M. Thorne, of Pittsburgh, Abram Strauss, of Philadelphia, and Frederick Amshel, of Pittsburgh.

The Executive Committee reported the following nominations; chairman, Frank C. Knowles, Philadelphia, secretary, Sigmund S. Greenbaum, Philadelphia. As there were no other nominations, the presiding officer instructed the secretary to cast the ballot, which was done as ordered.

The attendance at the meeting was approximately 40.

The Section adjourned at 5 p. m.

LESTER HOLLANDER, *Chairman,*
SIGMUND S. GREENBAUM, *Secretary.*

Members Registered in the Section on Dermatology

ALLEGHENY COUNTY SOCIETY—F. Amshel, H. L. Baer, G. W. Hiett, B. A. Goldman, W. H. Guy, L. Hollander, F. M. Jacob, L. L. Schwartz, Pittsburgh.

CAMBRIA COUNTY SOCIETY—J. W. Barr, Johnstown.

ERIE COUNTY SOCIETY—E. I. Steinberg, Erie.

FAYETTE COUNTY SOCIETY—H. A. Heise, Uniontown.

LACKAWANNA COUNTY SOCIETY—W. D. Whitehead, Scranton.

LAWRENCE COUNTY SOCIETY—W. A. Womer, New Castle.

MONTGOMERY COUNTY SOCIETY—P. W. McLaughlin, Norristown.

PHILADELPHIA COUNTY SOCIETY—S. S. Greenbaum, J. V. Klauder, F. C. Knowles, J. B. Ludy, A. Strauss, C. S. Wright, Philadelphia.

SCHUYLKILL COUNTY SOCIETY—W. J. Dzurek, Pottsville.

SOMERSET COUNTY SOCIETY—C. I. Shaffer, Ralphton.

VENANGO COUNTY SOCIETY—J. P. Davis, Oil City.

YORK COUNTY SOCIETY—S. K. Pfaltzgraff, York.

MINUTES OF THE SECTION ON UROLOGY

Wednesday, October 2, 1929

The first session consisted of a joint meeting with the Section on Surgery in a "Symposium on Prostatism," 2-5 p. m., in the Lodge Room of the Masonic Temple, chairman *pro tem* James C. Burt, Pittsburgh (Peter P. Mayock, the regular chairman of the Section on Urology, being absent on account of ill health) and Harvey F. Smith, Harrisburg, representing the Section on Surgery, presiding.

The following papers were read: "Gross Pathology of Prostatic Obstruction," by Alexander Randall, Philadelphia; "The Prostatic Patient as the General Surgeon Sees Him," by Frank R. Bailey, Pittsburgh;

"Preparation and Determination of the Qualifications of the Patient for Operation," by Edward J. McCague, Pittsburgh; "Prostatism. Palliative or Operative Treatment?" by Walter Estell Lee, Philadelphia, and Frederick S. Schofield, Philadelphia; "Prostatectomy. Choice of Operation, Technic, and Results," by Theodore Baker, Pittsburgh; "Problems in the Treatment of Prostatic Obstruction," by William E. Lower, Cleveland, guest of the Section on Surgery; and "The Prospects of the Prostatic," by Edward L. Keyes, New York, guest of the Section on Urology.

Discussion was opened by John B. Deaver, Philadelphia, followed by Donald Guthrie, Sayre, and Emory G. Alexander, Philadelphia, and Gideon Timberlake (visitor), St. Petersburg, Florida.

Thursday, October 3, 1929

The second session of the Section on Urology convened in the Guild Room of St. Paul's Chapter House, Erie, at 8.50 a. m., the chairman *pro tem,* James C. Burt, Pittsburgh, presiding.

The following officers were nominated for the ensuing year: B. A. Thomas, Philadelphia, chairman, and Thomas C. Stellwagen, Jr., Philadelphia, secretary. There being no other nominations, the chairman cast the ballot for their election.

In the first period, 9 to 9.55 a. m., the following papers were read: "The Limitations of the Cystoscope in Urology," by John B. Haines, Philadelphia; "What the X-Ray Can and Cannot Do," by James D. Morgan, Philadelphia; and "The Value of the Laboratory to Urology," by Herbert T. Kelly, Philadelphia.

Discussion was opened by Percy S. Pelouze, Philadelphia, followed by John B. Haines, Philadelphia, Edward L. Keyes, New York, and Gideon Timberlake, St. Petersburg, Florida, and concluded by John B. Haines, Philadelphia.

In the second period, 10 to 10.55 a. m., the following papers were presented: "The Anatomy and Physiology of the Sympathetic Nervous System of the Kidney," by Henry Sangree, Philadelphia; "Theoretical Indications for Renal Sympathectomy," by Lorenzo F. Milliken, Philadelphia; and "The Technic of Renal Sympathectomy and Résumé of Clinical Experience," by Elmer Hess, Erie.

Discussion was opened by Willard H. Kinney, Philadelphia, followed by Edward L. Keyes, New York, Gideon Timberlake, St. Petersburg, Florida, B. A. Thomas, Philadelphia, and Thomas C. Stellwagen, Jr., Philadelphia, and concluded by Lorenzo F. Milliken, Philadelphia, and Elmer Hess, Erie.

In the third period, 11 to 11.55 a. m., the following papers were read: "The Etiology, Diagnosis, and Treatment of Epididymitis," by Leo P. Gibbons, Scranton; "The Diagnosis, Differential Diagnosis, and Treatment of Hydrocele," by James E. O'Toole, Scranton; and "Differential Diagnosis and Treatment of Solid Tumors of the Testicle, with Reference Especially to Teratoma," by Thomas C. Stellwagen, Jr., Philadelphia.

Discussion was opened by Edward L. Keyes, New York, and concluded by Thomas C. Stellwagen, Jr., Philadelphia.

In the fourth period, 12 to 12.55 a. m., the following case reports were read: "Prostatic Calculus," by Maxwell Lick, Erie; "Prostatic Abscess Complicated by Chronic Nephritis and Uremia," by Paul R. Stalnaker, Philadelphia; "Exstrophy of the Bladder Operated upon by the Bergenhem Method Six Years Ago," by Thomas L. Disque, Pittsburgh; "Renal Calculus Simulating Acute Appendicitis," by Esten L. Hazlett, Canonsburg; and "Foreign Body in Kidney," by David B. McCune, McKeesport.

George A. Holliday, Pittsburgh, telegraphed that he was unable to present his paper on account of illness. Sylvia J. Roberts, Harrisburg, failed to appear for the presentation of his case report.

Discussion was opened by Edward L. Keyes, New York, and Gideon Timberlake, St. Petersburg, Florida, followed by B. A. Thomas, Philadelphia, Thomas C. Stellwagen, Jr., Philadelphia, and Henry Sangree, Philadelphia, and concluded by Thomas L. Disque, Pittsburgh, Esten L. Hazlett, Canonsburg, David B. McCune, McKeesport, and John D. Denney, Columbia.

The meeting adjourned at five o'clock.

Members Registered in the Section on Urology

Allegheny County Society—B. R. Almquest, R. L. Anderson, T. Baker, W. C. Bryant, J. C. Burt, T. L. Disque, S. M. Hankey, Pittsburgh; D. P. McCune, McKeesport; F. X. Straessley, Pittsburgh.

Clearfield County Society—B. G. Learn, Blandburg.

Crawford County Society—V. G. Hawkey, Meadville.

Dauphin County Society—E. S. Everhart, Lemoyne.

Delaware County Society—G. L. Armitage, W. A. Blair, Chester.

Erie County Society—J. E. Croop, J. A. Darrow, E. H. Drozeski, E. Hess, E. E. Kendall, M. Lick, Erie; M. J. McCallum, A. J. Sherwood, Union City.

Fayette County Society—R. P. Beatty, Uniontown.

Lackawanna County Society—J. E. O'Toole, Scranton.

Luzerne County Society—W. Baurys, Nanticoke; H. B. Wilcox, Kingston.

Lycoming County Society—J. P. Harley, Williamsport.

Mercer County Society—J. S. Knapp, J. Ward, Greenville.

Northumberland County Society—J. J. Donahue, Shamokin.

Philadelphia County Society—J. B. Haines, H. T. Kelly, W. H. Kinney, L. F. Millikin, P. S. Pelouze, A. Randall, H. Sangree, F. S. Schofield, P. R. Stalnaker, T. C. Stellwagen, B. A. Thomas, Philadelphia.

Potter County Society—J. H. Page, Austin.

Warren County Society—H. B. Russell, Sheffield.

Washington County Society—E. L. Hazlett, Canonsburg.

Members Registered Section Not Designated

Ernest J. Aten, Ambridge; A. J. Bearer, New Kensington; G. E. Bennett, Corry; David R. Bowen, Philadelphia; Charles H. Brown, Franklin; A. J. Bruecken, Pittsburgh; Ira A. Darling, Warren; C. W. Davis, New Castle; Walter F. Donaldson, Pittsburgh; J. C. M. Drake, Erie; C. S. Ecker, Oakmont; Louis H. Gale, Erie; Boyd W. Ghering, Edinboro; E. P. Gray, Wilkinsburg; William J. Humphrey, Union City; C. S. Hunter, Verona; I. Dana Kahle, Knox; George S. Klump, Williamsport; Edward Lyon, Williamsport; R. K. McConeghy, Coudersport; C. E. McCune, West Springfield; George E. Pfahler, Philadelphia; J. W. Schultz, Tremont; J. C. Stilley, Ludlow; Wilford L. Thunhurst, Edgewood.

Registration by Counties

Adams—0
Allegheny—135
Armstrong—4
Beaver—6
Bedford—2
Berks—7
Blair—6
Bradford—8
Bucks—3
Butler—12
Cambria—12
Carbon—0
Center—4
Chester—8
Clarion—4
Clearfield—15
Clinton—3
Columbia—1
Crawford—16
Cumberland—2
Dauphin—18
Delaware—7
Elk—4
Erie—140
Fayette—19
Franklin—0
Greene—0
Huntingdon—5
Indiana—2
Jefferson—4
Juniata—0
Lackawanna—18
Lancaster—8
Lawrence—10
Lebanon—1
Lehigh—9
Luzerne—20
Lycoming—32
McKean—8
Mercer—21
Mifflin—4
Monroe—0
Montgomery—9
Montour—2
Northampton—11
Northumberland—4
Philadelphia—83
Potter—2
Schuylkill—11
Snyder—0
Somerset—4
Susquehanna—1
Tioga—4
Union—1
Venango—17
Warren—17
Washington—14
Wayne—1
Westmoreland—14
Wyoming—1
York—10
Total—784

Delegates from Other Societies

C. J. Hollister, Pennsylvania State Dental Society; W. Blair Stewart, Medical Society of New Jersey; P. Henry Utech, Pennsylvania Pharmaceutical Association.

Registered Visitors

Francis G. Blake, New Haven, Conn.; Donovan C. Blanchard, Meadville; Frank M. Buckingham, Tidioute; H. H. Bullard, Erie; Harold L. Casey, Carbondale; Russell L. Cecil, New York, N. Y.; Leon H. Collins, Jr., Philadelphia; Arthur J. Cramp, Chicago, Ill.; H. Noble Crandall, Conneaut, Ohio; Vincent L. Curtin, Philadelphia; John K. DeTuerck, Erie; Emmett S. Elwood, Philadelphia; John H. Evans, Buffalo, N. Y.; W. G. Gardner, Philadelphia; Leon Goldstein, Hollidaysburg; F. G. Greenfield, Erie; S. S. Hamilton, Punxsutawney; Paul D. Harrison, Edinboro; Julius H. Hess, Chicago, Ill.; K. A. Hines, Meadville; C. H. Hodgkinson, Oil City; P. C. Jeans, Iowa City, Iowa; Edward L. Keyes, New York, N. Y.; C. B. King, Canton, Ohio; Richard M. Klussman, North East; Dean DeWitt Lewis, Baltimore, Md.; John A. Lichty, Clifton Springs, N. Y.; William E. Lower, Cleveland; A. Boyd Miller, Jr., Erie; J. D. Morgan, Philadelphia; Dorothea F. McClure, Pittsburgh; E. B. McCluskey, Pittsburgh; J. Edwin Purdy, Canton, Ohio; O. O. Ranta, Pittsburgh; A. N. Richards, Philadelphia; M. W. Rubenstein, Pittsburgh; Arthur N. Shipley, Baltimore, Md.; C. A. Shofer, East Liverpool, Ohio; Charles P. Small, Chicago, Ill.; S. G. Stewart, Philadelphia; William J. Sullivan, Dunkirk, N. Y.; Lewis O. Tayntor, Baltimore, Md.; Walter H. Vosburg, Dunkirk, N. Y.; Fred S. Weidman, Philadelphia; Adelaide Ellsworth Weston, Jamestown, N. Y.; Paul G. Weston, Jamestown, N. Y.; Udo J. Wile, Ann Arbor, Michigan; J. Kenneth Winter, Erie.

Women Visitors Registered

County	*Number*	*County*	*Number*
Adams	0	Lancaster	5
Allegheny	46	Lawrence	6
Armstrong	1	Lebanon	1
Beaver	4	Lehigh	8
Bedford	1	Luzerne	9
Berks	2	Lycoming	20
Blair	3	McKean	0
Bradford	3	Mercer	3
Bucks	0	Mifflin	2
Butler	4	Monroe	0
Cambria	11	Montgomery	6
Carbon	0	Montour	2
Center	1	Northampton	7
Chester	2	Northumberland	1
Clarion	1	Perry	0
Clearfield	7	Philadelphia	12
Clinton	3	Potter	1
Columbia	0	Schuylkill	0
Crawford	4	Snyder	0
Cumberland	0	Somerset	4
Dauphin	10	Susquehanna	1
Delaware	7	Tioga	2
Elk	1	Union	0
Fayette	16	Venango	5
Franklin	0	Warren	10
Greene	0	Washington	5
Huntingdon	3	Wayne	0
Indiana	1	Westmoreland	1
Jefferson	1	Wyoming	0
Juniata	0	York	6
Lackawanna	4	Total	253

Officers' Department

WALTER F. DONALDSON, M.D.
Secretary
8063 Jenkins Arcade Bldg.,
Pittsburgh, Pa.

THE 1929 SECRETARIES' CONFERENCE

The 24th Annual Secretaries' Conference will be held in the Penn-Harris Hotel, Harrisburg, on Tuesday, December 3, 1929, beginning with luncheon at 1 p. m. An interesting program has been arranged in which the chief topic for discussion will be Methods for Improving the Quality of the County Medical Society Service to its Members as Well as to the Public. The afternoon program will include a Question Box, and carefully prepared informative replies will be made to questions submitted in advance relative to the relation of members to their county, state, and national medical organizations. Questions for the box should be addressed to the office of the Secretary of the State Society. It is understood that the county society secretaries and editors in attendance will be honored by the presence of the officers of the State Society.

Papers to be read and discussed under the above general heading will include the following: (1) "County Medical Society Representation on Governing Boards of Lay Health Organizations," by Dr. Harold A. Miller, Pittsburgh; (2) "Councilor District Meetings as a Stimulus to County Society Progress," by Dr. Edgar S. Buyers, Secretary, Montgomery County Medical Society and Councilor for the Second District. Dr. Buyers will require no introduction to those in attendance at the Secretaries' Conference. Dr. Miller is an ex-president of the Allegheny County Medical Society; he is widely known as a teacher and practitioner of obstetrics, and has made a life study of the subject assigned him above.

THE ERIE SESSION

The history of the 79th Annual Session of our Society, centering as it will about the City of Erie, will redound greatly to the credit of a small group of leaders in the Erie County Medical Society led by its secretary, Dr. Stackhouse. The well-rounded success of the session at Erie had its inception in the determination evinced by this group early in 1927 to bring to the City of Erie the 1929 session of the State Society. Anticipating that their invitation would be accepted by the 1928 House of Delegates, the Erie County Medical Society and its Woman's Auxiliary were represented at the Allentown session by "scouts," functioning not unlike the "ivory hunters" of big league baseball teams, who scoured the Allentown session for suggestions regarding entertainment to be considered, adopted, improved upon, or discarded. As a result, the nucleus of the annual session, usually arranged by the State Society, was in 1929 perfectly complemented by the features essential to complete success which are dependent absolutely upon the county society serving as host to the State Society. The vote of thanks extended to the Erie County Society by our House of Delegates may resound with well-worn phrases of gratitude, but they reflect, we are sure, the appreciation of the thousand or more individual guests who were so graciously entertained.

The moving-picture theater, which for the first time was designed by the Scientific Exhibit Committee to seat comfortably those in attendance, proved a success. The thirty chairs were nearly always filled throughout the long hours of each day's session, and the attendance on several occasions was increased by an equal number of standees. The films portraying various procedures in diagnosis and in treatment, it is believed, proved helpful and instructive to our members in attendance. Experience, however, demonstrated the necessity for limiting attendance at future sessions to those entitled to attend. This point was emphasized when one "peeper" fainted during the screening of an obstetrical film. He was later identified as a local "swimming instructor."

The opportunities for broadening one's knowledge by questioning demonstrators in the Scientific Exhibit proved almost inexhaustible, being limited only by the time at one's disposal. One old general practitioner beamed with gratitude on account of the opportunity to learn at the exhibit of the Warren State Hospital that mental patients entering this hospital receive the benefits of the same painstaking efforts in laboratory and clinical diagnostic technic as suggest security for the patient entering a good general hospital. The metamorphosis of the old "county home," or "state farm," into a modern mental hospital, under the direction of well-qualified medical men and women, should be a source of pride and satisfaction to the fellow members in our State Society of such leaders as are typified by Drs. H. W. Mitchell, of Warren, and J. Allen Jackson, of Danville.

An analysis of the registered attendance at the Erie session justifies, we believe, one of the arguments in favor of holding an occasional annual session in extreme corners of the State. For the first time, approximately two hundred of our members from Erie, Crawford, McKean, Venango, and Warren counties, have, by personal attendance, acquired knowledge of the social, scientific, and economic scope of their own State Medical Society. It is hoped that a large proportion of them have been so favorably impressed that they will hereafter regularly attend our annual sessions, renewing acquaintances and contacts made at Erie, and "cashing in" on the yearly opportunity for widening their own horizon.

Approximately 10 per cent of the members of the State Society registered at Erie. Upon a review of the registration county by county, as published in this issue, it will be found that this percentage was influenced but slightly by the varying distances from Erie. We believe the palm for attendance should be granted to the Lycoming County Society, thirty-two members, or 21 per cent of their membership, having trekked with Secretary Brenholtz the necessary two hundred or more miles across the mountains of Pennsylvania to Erie.

The growing attendance of women, as well as their influence and that of the Woman's Auxiliary upon our registration, is no longer deniable. Their presence at the opening general meeting,

at the President's reception, and in and about the hotel lobbies, has been established, we hope, as an inseparable contribution to the completeness of our annual sessions.

CONTRIBUTIONS TO MEDICAL BENEVOLENCE FUND

The Committee on Medical Benevolence makes grateful acknowledgment of the following contributions to the Medical Benevolence Fund which have been received since September 15th:

Woman's Auxiliary to Beaver County Medical Society	$200.00
Woman's Auxiliary to Philadelphia County Medical Society	100.00
Woman's Auxiliary to Lebanon County Medical Society	50.00
Woman's Auxiliary to Butler County Medical Society	25.00
Woman's Auxiliary to Chester County Medical Society	25.00
Woman's Auxiliary to Allegheny County Medical Society	6.00
A Friend (Allegheny Co.)	5.00

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to October 15:

ALLEGHENY: *New Members*—Townsend W. Baer, 201 N. Highland Ave., Isadore A. Lichter, 604 Cedar Ave., N. S., George H. Smith, 239 Brownsville Ave., Mt. Oliver, Pittsburgh; Harry A. Klee, 225 E. Main St., Carnegie; Benjamin B. Handmacher, 14th and Merchant Sts., Ambridge; James J. Carman, Butler Pike, Allison Park. *Removal*—Edward Kisel from Braddock to Ambridge Theater Bldg., Ambridge; John J. Munden from Pittsburgh to 561 E. Broadway, Alliance, Ohio; J. Sanford Moyer from Philadelphia to 210 E. 64th St., New York City. *Deaths*—Henry Hugh Clark, Pittsburgh (Bellevue Hosp. Med. Coll. '68), July 13, aged 86; James A. Rodgers, Pittsburgh (Univ. of Pgh. '19), August 3, aged 35.

BEAVER: *New Members*—Everett H. Laird, Aliquippa; William G. Waddell, Beaver; Horace D. Washburn, Freedom.

BEDFORD: *New Member*—George S. Enfield, Bedford. *Removal*—William H. Brennan from Osterburg to 970 Park Ave., Meadville (Craw. Co.).

BLAIR: *Removal*—Charles W. Delaney from Altoona to 621 Colfax St., Denver, Colo.

BRADFORD: *Removal*—Margaret R. McMahan from Monroeton to Athens.

BUTLER: *Reinstated Member*—Charles F. Daubenspeck, Butler.

CLEARFIELD: *New Members*—Walter P. Thorp, Winburne; LaMar H. Davenport, 41 N. Brady St., Dubois. *Transfer*—De Vere Ritchie, Clearfield, from Tioga County Society.

CLINTON: *Removal*—Clair S. Bauman from Lock Haven to Professional Bldg., Waterville, Maine; Clarence Klaer from Bitumen to Warrensville (Lycoming County).

CRAWFORD: *Reinstated Member*—Arne W. Crawford, Geneva.

DAUPHIN: *New Member*—Julia Russell, 112 State St., Harrisburg.

DELAWARE: *Deaths*—J. Harvey Fronfield, Media (Univ. of Pa. '83), September 8, aged 72; A. Chester Wolfe, Ridley Park (Med. Chi. Coll. '03), September 16, aged 52.

ERIE: *New Member*—Andrew J. Sherwood, Union City.

FAYETTE: *New Members*—Robert A. Gaus, Poland Mines (Greene Co.); John J. Mechem, Masontown; Cornelius M. Mhley, Fayette T. & T. Bldg., Uniontown.

HUNTINGDON: *New Member*—Paul Maxwell, Mt. Union. *Transfer*—Marsden D. Campbell, Mapleton, from Clinton County Society.

INDIANA: *New Members*—Joseph Brain, Jr., McIntyre; Edmund T. Lentz, Waterman.

JEFFERSON: *New Member*—William L. Brohm, Timblin.

LACKAWANNA: *Transfer*—Michael G. O'Brien, 1324 Capouse Ave., Scranton, formerly of Dupont, from Luzerne County Society.

LUZERNE: *Reinstated Member*—John C. Fleming, Dallas. *Transfer*—Luther S. Luppold, White Haven, formerly of Mt. Penn, from Berks County Society. *Death*—Jefferson P. Biehl, Plymouth (Jeff. Med. Coll. '83), August 26, aged 72.

MCKEAN: *Death*—Thomas L. Kane, Kane (Jeff. Med. Coll. '86), September 11, aged 66.

MONTOUR: *New Member*—Henry F. Hunt, Geisinger Hospital, Danville.

NORTHUMBERLAND: *Resignation*—Walter E. Kiefer, Jamaica, L. I., to join Queens County Medical Society.

PHILADELPHIA: *Removal*—W. Kenneth Knotts from Philadelphia to Federalsburg, Md. *Deaths*—Nathan H. Hornstine (Med. Chi. Coll. '04), September 14, aged 58; I. Valentine Levi (Univ. of Pa. '00), September 11, aged 52; Mabel H. Pearson, Atlantic City, N. J. (Woman's Med. Coll. '20), recently, aged 46; S. MacCuen Smith (Jeff. Med. Coll. '84), September 14, aged 66; E. Bryan Kyle (Jeff. Med. Coll. '93), September 5, aged 68.

SCHUYLKILL: *New Member*—Francis K. Moll, Pottsville.

SNYDER: *Reinstated Member*—A. Jerome Herman, Middleburg. *Transfer*—George H. M. Bogar, Selinsgrove, from Perry County Society.

SOMERSET: *Removal*—Milton U. McIntyre from Boswell to 634 Franklin St., Johnstown.

VENANGO: *New Members*—James A. Welty, Veach Bldg., Oil City; Merl L. Glenn, Emlenton; M. A. Newell, Clintonville.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since September 14. Figures in first column indicate county society numbers; second column, State Society numbers:

Sept.	14	Beaver	87-88	7776-7777	$7.50
		Huntingdon	33	7778	7.50
		Luzerne	301	7779	7.50
	20	Jefferson	50	7780	3.75
	23	Indiana	57-58	7781-7782	7.50
		Schuylkill	165	7783	7.50
	24	Venango	51, 52, 54	7784-7786	11.25
		Beaver	89	7787	3.75
		Montour	33	7788	3.75
	25	Clearfield	62-63	7789-7790	7.50
Oct.	1	Snyder	9	7791	7.50
		Dauphin	178	7792	3.75
		Butler	57	7793	7.50
		Erie	157	7794	7.50
		Bedford	16	7795	7.50
	10	Crawford	34	7796	7.50
		Allegheny	1292-4-5-7-8-9	7797-7802	30.00
	12	Fayette	127-129	7803-7805	11.25

County Society Reports

In *California and Western Medicine*, August, 1929, appears a timely editorial on a survey of membership figures in a county society. As it truly states, organized medicine in principle aims to include every eligible doctor in its fold. Attention is called to the necessity, in these troublesome times of propagandists, for every county society to be alert to its responsibility for enrolling to membership every eligible nonmember, who, if not one of us, is very apt to be or actually is against us. Each county society is urged to become more active in this matter.

BERKS—SEPTEMER

The initial fall meeting of the Berks County Medical Society was held September 10th in its recently renovated auditorium at 429 Walnut Street, Reading. A short business meeting preceded the scientific program. Dr. Nolan D. C. Lewis, clinical psychiatrist and psychoanalyst of Saint Elizabeth's Hospital, Washington, D. C., addressed the Society on "Methods of Approach in Psychiatry."

Dr. Lewis: Just as chromosomes help to form a nucleus, nuclei help to form a cell, cells to form an organism or individuals, individuals help to form states and states to form nations. For this reason the medical profession must study the individual in relation to the group. This is called the integration method. In surgery, it is usually sufficient to study the patient himself; in psychiatry, the parents, teachers, associates, local and national heroes all add to the behavior of the resulting individual. It is frequently essential to discover if the individual is not mostly a copy instead of an inherited product. The problem frequently arises as to what makes the individual behave as he does. Is it endowment or is it training? The endowment may result in physical or intellectual deficiency. Intellectual deficiency may be either emotional or ethical. The mind regulates the behavior of the entire organism.

Just as certain physical aspects designate a certain definite constitutional make-up, whether arthritic, endocrinous, asthenic, or neoplastic, so behavior activities make for a definite psychic constitution. These types may be classified as (1) the obliterative or unconscious state in which we have the benign stupors and epilepsy. (2) The schizoid type, in which the subject is withdrawn, sensitive, and a very poor mixer. Dementia præcox patients are of this type. (3) Psycholoid reaction. In this group are the manic depressants, frequently very good mixers. (4) The paranoid group. These are not introverted; they project ideation to others; they are nearly normal except in certain organized or systematized ideas.

The members of the neurotic group are never a menace to society except to their relatives or to their doctor. The psychotic group have a full-blown constitution. The nature of the psychotic reaction is a predetermined fact. The neurotics are passively psychic and about 85 per cent of them show tuberculous lesions at autopsy. The paranoids are actively psychic, they are the cranks, blow up over trifles, and usually die from circulatory disease or malignancy. When the behavior of the psychoneurotic is analyzed, it is not altogether abnormal; something prevents or inhibits him from enjoying life to the full.

The neurotic patient is the shopper; he goes from one doctor to another; he is selfish, childlike, sensitive, acts like a spoiled child, is fond of his parents, spends his time in introspection, is emotionally unstable, afraid to be alone, shy or impulsive, has a inferiority complex, and may be exhilarated at times. He is sexually immature and has sex aversion, being either impotent or frigid depending on whether he is of the male or female sex. He has headaches, pain, and insomnia. He is his own worst enemy. He is the worst pest in all psychiatry. Since by hypnotism we can cause any organ of the body to become congested, or can alter the functions or secretions, there is a possibility that prolonged anxiety concerning any organ may produce dysfunction of that organ. Therefore, the resulting symptoms of the neurotics may not be altogether imaginary.

There are very few organic diseases without psychic symptoms. Frequently a paralytic patient will show, in addition to his other ailments and superimposed upon them, a hysterical paralysis. There always seems to be an anxiety neurosis connected with all ailments, no matter how slight; and vice versa, when a psychoneurotic has a serious illness, his neurotic symptoms will usually leave him until he has recovered from his organic ailment. In hyperthyroid conditions, the gland may make the body sick, but psychoneurosis may make the thyroid sick from mere concentration anxiety. Hypertension may be functional or organic; sometimes it is difficult to tell where one ends and the other begins.

Lack of biologic function upsets the individual; no function can be forever denied, something always happens. The psychoneurotic is affected more than any other individual. A feeling of lack of control causes a patient to be anxious about impending insanity, but unless you are predisposed to insanity, you will never become insane. When logic and emotion are opposed, logic loses and emotion wins.

The annual outing of the society was held Wednesday, July 10th, at Umbenhauer Park, Bernville, Pa. The main event of the afternoon was a game of baseball between Dr. Bagentose's "Sclerotics" and Dr. Alexander's "Diabetics." Though the game resulted in a tie score, it was hotly contested and frequently required the imposing garb and authority of a sheriff as portrayed by Dr. Louis J. Livingood. Other games and sports were enjoyed, such as a treasure hunt in the grove, cards, and stunts. Dr. Bley won the feature prize for correctly guessing the number of pills in a bottle.

Pearl E. Hackman, M.D., *Reporter.*

BLAIR—SEPTEMBER

The regular monthly meeting for September was held in conjunction with the Mercy Hospital Annual Clinic Day, September 24th. Some of the interesting points brought out by members of the Mercy Hospital staff were as follows:

Dr. C. E. Snyder: "A Review from the Obstetrical Department."—More attention should be given to prenatal care. Too often a doctor is called in to attend a case of confinement which he has not previously seen. It is well to take the pelvic measurements at the very first call, and if there is any abnormality, arrange to have the patient placed in a hospital where proper care can be given if necessary. Do not do five or six vaginal examinations and apply forceps at home before referring the case to the hospital. Never hurry a case by giving pituitrin or ergot, and forceps should never be applied until a very definite indication arises. Version and extraction are very dangerous procedures in the hands of the average physician, and should never be attempted except as a last resort.

DR. H. H. DIGHT: "A Rhinologic Aspect of Bronchial Asthma."—Many cases of asthmatic cough are caused by a pathologic condition in the upper respiratory tract or in the accessory sinuses. Among some of the most common causes are nasal polyps, cysts in the maxillary or ethmoidal sinuses, and chronic inflammation of the mucous membrane or turbinates, causing a partial block of the sinusoidal ducts.

By producing a partial block in the nasal passages of dogs, asthma has been produced experimentally. It was found that this experiment carried out on a pregnant dog not only produced asthma in the mother, but greatly weakened the offspring.

Diseased tonsils are also an important factor in chronic asthmatic conditions. With proper operative procedures for pathologic conditions of the upper respiratory tract, many cases of asthma have been completely cleared up.

DR. D. G. BURKET: "End Results in Hernia Surgery."—Most of the recurrences of inguinal hernia following operation are in the direct rather than the indirect type. Old men who have worn a truss for years are usually very poor risks, as the surrounding tissue is devitalized. A new procedure which has been giving good results is the use of strips of fascia for sutures. The fascia strips are not put in under tension, but are placed in a criss-cross arrangement after the incision has been closed with chromic catgut sutures. It has been found that this fascia suture remains permanently and takes on a tendonlike appearance.

DR. W. H. HOWELL: "Graphic Analysis of 200 Appendectomies Performed in the Mercy Hospital."—In 200 appendectomies performed at the Mercy Hospital, 95 were acute, 65 gangrenous, and 19 ruptured with abscess formation. The series included patients from two to seventy years of age, but by far the greater number of cases occurred between the ages of sixteen and twenty.

It is not always so easy as is sometimes supposed to diagnose a case of appendicitis, and many other conditions are often mistaken for it. One example of the variation of symptoms which may exist was shown in the case of a man admitted to the hospital with no elevation in temperature nor abdominal rigidity, but with rectal tenesmus, frequency of urination, and increased white-cell count. On operation the patient was found to have a gangrenous appendix lodged far down in the right lower quadrant, back of the bladder.

DR. J. H. GALBRAITH: "Paralysis of the Serratus Magnus Muscle Caused by Injury to the Posterior Thoracic Nerve."—Two cases were shown of paralysis of the serratus magnus muscle due to injury of the posterior thoracic nerve. The serratus magnus muscle originates along the eight upper ribs and intercostal fascia and inserts in the angles and dorsal border of the scapula. Its action raises the ribs during inspiration and rotates the scapula. Paralysis of this muscle causes a rather characteristic rotation of the scapula outward when the patient raises his arm. The arm is greatly weakened and motion is restricted. No treatment is of much avail.

These two patients had been previously treated for neuritis with very poor results. They were shown to demonstrate the value of a careful physical examination of all patients before instituting treatment.

DR. H. C. THOMAS: "Demonstration of a Case of Banti's Disease."—The case shown was that of a boy aged about sixteen. On admission he showed a large palpable mass in the left upper quadrant, extending from the margin of the ribs to below the umbilicus, which proved to be the spleen. The red-cell count was around four million. There was marked leukopenia with a relative lymphocytosis. The skin had an icteroid tint.

A splenectomy was performed and the boy's condition shows marked improvement at the present time.

R. V. SILKNETTER, M.D., *Reporter.*

PHILADELPHIA

October 9, 1929

The president, Dr. John A. McGlinn, in the chair.

PROBLEMS IN TUBERCULOSIS

Presented by members of the staff of Eagleville Sanatorium. "Study of the Gastro-intestinal Tract in Pulmonary Tuberculosis, With a Preliminary Report on Newer Laboratory and Roentgen Findings in Ileocecal Tuberculosis." By DRS. HARRY SHAY, LOUIS COHEN, and J. GERSHON COHEN.—Symptoms in enteric tuberculosis vary and defy interpretation as a specific disease entity. Symptoms as an aid to diagnosis in this condition have the same status as twenty years ago—no certain diagnosis and no definite differential diagnosis can be made by the symptoms.

This paper is a preliminary report on certain findings in ileocecal tuberculosis not previously described. The work was begun two years ago on patients with gastro-intestinal symptoms. Their chest lesions were classified and they were studied in the x-ray and gastro-intestinal departments, having had fractional gastric analyses, stool examinations, sigmoidoscopic study and complete serial x-rays. Special ileocecal serial plates were made and the colon was studied with both barium and air enemas. The results of the gastric analysis and sigmoidoscopic work will be published elsewhere.

As early as 1883 it was known that the finding of tubercle bacilli in the stool was not pathognomonic of intestinal disease, since they could be caused by an open lung lesion. The small intestine has been largely unexplored, chiefly because of its inaccessibility. In considering the small intestine, or for an examination of the excreta, it is imperative that both normal and abnormal findings be known after a definite test load. In this work the Schmidt diet has been employed because it is simple, easy to prepare accurately, is well tolerated, and provides sufficient calories for the resting patient.

In studying the stool we look at the unstained specimen, at a portion stained with Lugol's solution, and another stained with sudan III. In the normal, in the unstained specimen, are found isolated muscle fibers, flakelike, with cross striations, the fatty-acid salts of calcium, colorless soaps, isolated potato cells, and remains from the oatmeal gruel and cocoa. With sudan III there are normally no fat globules. With Lugol's there are normally no extracellular starch granules. In thirteen of the fourteen patients with ileocecal tuberculosis who were studied, marked starch indigestion with *free starch granules* was found. How explain this clinically? If it were due to increased intestinal motility, all the food elements would be present; or if it were caused by fermentative dyspepsia the stool would be light in color, foamy, and the starch would not be present as free granules.

Achylia gastrica gives a picture similar to fermentative dyspepsia, but here again the granules are in cellulose envelopes. Cases with clinical symptoms of gastro-intestinal disorder—pain in the epigastrium or hypochondrium, with a history of diarrhea, blood in

the stool, gas, vomiting, and poor appetite—may show on laboratory or x-ray study no defects in the gastro-intestinal tract, while, on the other hand, patients classified as negative for bowel involvement may present a defect in starch digestion and a defect on x-ray in the ileocecal region. There would seem to be some specific derangement of carbohydrate digestion occasioned by some as yet not understood involvement in the ileocecal region. The diagnosis was confirmed, in five of the cases studied, by autopsy or operation. At present we can give no explanation, but a résumé of the histories of these patients indicates a need for a search of the gastro-intestinal tract in all cases of pulmonary tuberculosis.

DR. A. GERSHON COHEN said that in the improved technic developed at Eagleville, a barium enema is used which is expelled after the x-ray. Then an injection of air is given (from five to seven Politzer bags full) and a second picture is taken. Ulcerations show clearly with the air enema. This was well illustrated by x-ray films. Attention was called to the fact that while normally the ileum joins the cecum as though a cone, with the apex joining the large bowel, in patients with tuberculosis of this region the cone is reversed and the base is presenting at the cecum.

"The Sedimentation Test as a Routine Procedure in the Tuberculosis Dispensary." By DRS. JACOB W. CUTLER and LOUIS COHEN.—The blood sedimentation test in tuberculosis is of great importance, and all tuberculous patients should be given it. Our experience dates to 1925, since which time hundreds of tests have been made, until now no diagnosis seems complete without it. While x-ray and the physical examination reveal pathologic changes, they do not indicate the amount of constitutional disturbance, or the activity.

In pulmonary tuberculosis a determination of the activity is difficult. Here is a valuable means for this determination—a method not meant to displace other measures of diagnosis, but an important adjunct. Five hundred ambulatory patients were observed, to determine the value of the test in estimating activity of the disease as compared with other findings. A careful history was taken of each, and after an examination of the lungs was made, a written opinion was given by the physician as to the activity. The study was made as impartial as possible. Three groups of patients were taken: (1) those in the diagnostic clinic diagnosed as nontuberculous; (2) those in the diagnostic clinic with a diagnosis of tuberculosis; (3) those discharged from sanatoria with definite tuberculosis. The test is nonspecific, reflecting a disturbance in the blood, and indicating the measure of destruction. It completes the diagnosis and measures the intensity of the tuberculous process. After an established diagnosis one may learn whether or not there is activity, and the degree. The sedimentation test is accurate in over eighty-five per cent, excelling all other signs and symptoms in reliability of diagnosis and in the estimation of quiescence. It is the most reliable single test we have. A normal sedimentation test was never obtained except in a normal individual or where no destruction was going on. The test should be routine, for it entirely eliminates the personal equation and presents a scientific fact.

"Selective and Bilateral Artificial Pneumothorax." By DR. A. J. COHEN.—Artificial pneumothorax is the best therapeutic measure in the treatment of tuberculosis that has been developed in modern times, and has proved the safest, surest, and most economical method to use in conjunction with the sanatorium. Since 1894 no phase of physiotherapy has been given more attention or been so unanimously approved. Its original purpose was complete collapse of the affected lung, and the results were almost miraculous, but there are disadvantages in complete collapse. It displaces the mediastinal organs, disturbs the circulation, puts an extra strain on the other lung, and may result in the tearing of small adhesions, pyopneumothorax, or pleural effusion. Its scope is limited since it must be unilateral.

Good results were noticed in partial collapse, and it was found that the gas had a tendency to gather over the affected portion of the lung. This selective collapse occurred because of the inelasticity that resulted from the action of the disease on the tissues in question. Therefore, partial collapse has now become the procedure of choice. It throws less work upon the contralateral lung, it produces less deviation of the mediastinum, it obviates the disagreeable results of overcompression, and makes the bilateral operation safe. A simple method of administration has been evolved at Eagleville, and a paper on the technic will soon be published. However, the operation is not a simple one, and it may have fatal consequences; hence the cases must be selected with the greatest care, and treatment instituted at the proper time with frequent fluoroscopic and x-ray observations. Such treatment can be given only in a well-equipped institution. The healthy lung should never be prevented from expanding, for by its action the air is driven forcibly over the weak areas to compress them.

MARY A. HIPPLE, M.D., *Reporter.*

WASHINGTON—SEPTEMBER-OCTOBER

The September meeting was a rather unusual one. It was held at the club house of the Monongahela Valley Country Club on Wednesday, September 17th, and the Society was the guest of the members from Monongahela.

Dr. W. M. Lilley, of Brownsville, a surgeon of the H. C. Frick Coal and Coke Company, was the first speaker, and his subject was "Fractures and Their Care." Dr. Lilley spoke from a large experience, and his talk was intensely interesting and practical. Following this Dr. R. D. Urbahns, of Monongahela, read a paper on "Present-Day Principles of Surgery." Dr. Urbahns stressed the three cardinal principles of all surgery, hemostasis, anesthesia, and asepsis. A free discussion of both papers followed.

Dr. C. F. Linn, a member of the Society, is a patient in a hospital in Aspinwall, and a letter was signed by each member conveying the good wishes of the Society to him.

Following this several of the forty-seven members and visitors present took advantage of the golf course.

The October meeting was held in the Washington Hospital, Washington, Pa., Wednesday, the 9th.

The meeting was called to order by the Dean, Dr. L. D. Sargent, who spoke briefly on the plans for the next two or three meetings. It was decided to hold a joint meeting with the Woman's Auxiliary in the near future.

Dr. W. D. Martin and Dr. C. A. Crumrine, delegates to the convention in Erie, gave reports on the proceedings of the House of Delegates at the meeting and also mentioned some of the most important scientific papers. The attendance from the Washington County Society and the Auxiliary at the Erie meeting was very good indeed.

The scientific program consisted of a very carefully prepared and well-delivered clinic on the subject of

"Hernia" conducted by Dr. O. G. Lewis, of Washington, Pa. Dr. Lewis showed several patients to demonstrate the end results in the operation for different kinds of hernia, and covered the subject in a very thorough manner. He also had on exhibition several very large drawings, which had been done by a local artist, illustrating the subject, and which were of great help in understanding the different steps in the operations.

Dr. Lewis feels that it is seldom possible to trace a hernia entirely to one instant of extreme exertion. He believes that most hernias are the result of a congenital defect with a weakness in the abdominal wall which manifests itself only at some moment of extreme exertion. He says that no one operation is suitable for every type of hernia, whether inguinal or femoral; each one must be studied, and the proper procedure of operation cannot always be decided until the patient is actually on the table.

This paper was discussed at some length by Drs. W. J. L. McCullough and J. F. Donehoo, of Washington, and Dr. W. M. Lilley, of Brownsville.

C. A. CRUMRINE, M. D., *Reporter.*

The Woman's Auxiliary to the Medical Society of the State of Pennsylvania

MRS. WILDER J. WALKER, *Editor*
546 South Street, Greensburg, Pa.

MINUTES OF THE FIFTH ANNUAL MEETING

The fifth annual meeting of the Woman's Auxiliary to the Medical Society of the State of Pennsylvania was held at the Y. W. C. A., Erie, Pa., September 30 to October 3, 1929.

The opening meeting was held Tuesday morning, October 1st, with Mrs. Charles B. Forcey, president, in the chair and Mrs. Myer Solis-Cohen as secretary.

The president opened the meeting with a brief speech of welcome, and announced that Mrs. J. Newton Hunsberger, of Norristown, had been chosen president-elect of the Woman's Auxiliary to the American Medical Association.

Dr. O. N. Chaffee, president of the Erie County Medical Society, made a short address of welcome, presenting to the president of the Auxiliary a gavel made of wood from Perry's flagship.

Mrs. Charles H. Smith responded to this welcome in behalf of the Auxiliary.

PRESIDENT'S ADDRESS

Twelve months ago this year had just begun,
And now, my friends, I find that it is done,
Although some days were very dark and blue,
I had faith that the sun would soon shine through,
I thank the friends who shared the year's long road,
And made of all the work a fairy load.

This little verse written by a friend helps to express my feelings as we come to the end of the fifth year of the existence of the Woman's Auxiliary to the Medical Society of the State of Pennsylvania. Under the guidance of our State Society and our own Executive Board, who have given so unselfishly of their thought, time, and money, we have exerted every effort to advance the interests of the Auxiliary.

This year acting upon the suggestion of our State President, Dr. Thomas G. Simonton, and the Board of Trustees, we stressed periodic health examinations and health programs. The inestimable value of periodic health examinations is no doubt apparent to all of you, and we should lend every effort to interest every one in this direction, impressing upon them that health examinations become a habit, and above all we should set a good example by faithfully following up our own examinations. We have not made much headway along these lines this year, but we hope that in the very near future every county auxiliary will include in its program for the year Periodic Health Examination Day.

In order to carry out successful health programs, our own National Auxiliary advocates self-education and education of our membership in the fundamental principles of health promotion and disease prevention. Dr. Harris of Chicago in his address before the Woman's Auxiliary at Portland, Oregon, said: "Education is the one thing that people need more than anything else, education along lines of health, how to maintain it and how to recover it when lost." By educating the general public, we as Auxiliary members would render the greatest service to the medical profession in its efforts to improve the good health of the people.

Our district councilor chairman reports a very encouraging year, and she and her seven councilors have increased the membership of the State Auxiliary from 1,562 to 1,651 members, and have added two new counties, Tioga and Blair, to our list. Clinton and Somerset have been reorganized and are very anxious to carry out all the instructions given by their State Auxiliary. We recommend, in order to complete our family, that councilors be appointed in all eleven districts, that each councilor visit each county in her district once a year, and that she sponsor a district meeting during the year for the purpose of holding round-table discussions of the difficult problems which confront each and every auxiliary. Three such conferences have been held so far this year, one in the Tenth District with representatives from Allegheny, Beaver, and Westmoreland Counties; one in the Eleventh District, with members from Cambria and Fayette Counties; and the other in the Second District, with members from Chester, Berks, Bucks, and Montgomery Counties, and guests from all the surrounding counties. A conference was held in the Eighth District from which we had hoped to receive some word before the annual session, but Erie alone is organized in this district. By our next annual session, we hope to be able sufficiently to interest the county societies in every district in the work of the Auxiliary that they will give their consent to the organization of county auxiliaries.

The contributions to the Medical Benevolence Fund have far exceeded our expectations and we feel that most of the county auxiliaries have included it in their budgets as twenty-two have responded generously. Dauphin County heads the list this year, and we are extremely grateful for their thoughtfulness and generosity.

We wish to express our appreciation to the counties which have so conscientiously contributed news to the PENNSYLVANIA MEDICAL JOURNAL and in this way helped our Chairman of Education and Publicity to make her department a success. Dauphin, Erie, Lackawanna, Montgomery, Philadelphia, Washington, Fayette, and Westmoreland have sent reports monthly. We should like to recommend to each and every county that they appoint a State Reporter who will see that notices of their meetings and special entertainments are sent in to our JOURNAL and that some arrangement is made that their members read the JOURNAL. We should be

very grateful for the space allotted us and should endeavor to make the best of it.

Our National Auxiliary has again asked us to consider the question of an Advisory Board, consisting of five members appointed by the State Medical Society and, in turn, each county the same, appointments being made by the county society. Two counties have tried it, with great success, and other counties have submitted the proposition to their respective county societies. We heartily recommend this Advisory Board, as the necessity for such advice was verified at the Portland Session when a problem of vital importance before the House had to be presented to the National Advisory Board. We trust it will meet with the approval of the county societies.

During the year, your president has held conferences in different parts of the State with members of the Board and of the Auxiliary, has had one Executive Board meeting, has visited several counties, and regrets keenly her inability to meet with several counties who so kindly extended her invitations. She also attended every session of the National Convention at Portland, Oregon, where Pennsylvania was greatly honored by having Mrs. J. Newton Hunsberger, one of our past presidents, chosen President-Elect of the Woman's Auxiliary to the American Medical Association. We know of no one more worthy of this honor.

As we come to the close of the year 1928-1929, we realize alas that it was only too short for the immense amount of work to be done, and words are inadequate even to try to express what the year's work has meant. It has indeed been a great pleasure and experience, and we wish to express our appreciation to our Executive Board, always willing to coöperate, to our efficient Secretaries, never too busy to carry out our wishes, and to our most competent Treasurer. May we also take this opportunity to thank the members of the Auxiliary for their coöperation and interest, without which we should have been helpless. We must not forget that Auxiliary means helping, aiding, and that our actual vision and work must remain according to the ideals and plans worked out by our State Medical Society. As a last request, your president wishes to remind you that a Periodic Health Examination is essential.

EVELYN M. (MRS. CHARLES B.) FORCEY, *President.*

The president appointed the following members of the Auditing Committee: Mrs. John H. Page, Potter County, chairman, and Mrs. William J. Armstrong, Butler County.

The chairman of the Nominating Committee, Mrs. Thomas H. Weaber, was instructed to post the ballot, in accordance with the By-Laws.

On motion, the meeting was declared adjourned.

ROSEBUD TESCHNER (MRS. MYER) SOLIS-COHEN,
Recording Secretary.

The House of Delegates

A meeting of the House of Delegates was held at the Y. W. C. A., October 1st, at 1.30 p. m., with Mrs. Charles B. Forcey, president, in the chair and Mrs. Myer Solis-Cohen as secretary.

The president called the meeting to order.

The Invocation was pronounced by the Rt. Rev. J. M. Gannon.

The president of the Erie County Auxiliary, Mrs. C. G. Strickland, welcomed the visiting women.

The chairman of the Program Committee, Mrs. Joseph A. Stackhouse, announced the program.

The secretary read the minutes of the Executive Board meeting held on Monday night, September 30th, and, after corrections were made, these were approved.

The corresponding secretary, Miss Juliet Wilson, read the following report:

During the year 1928-9, 507 pieces of mail have been sent to the presidents, secretaries, and members of the various county auxiliaries. This number also includes letters to committee chairmen, the president's letter urging periodic health examinations, those in regard to membership lists and county officers, the national president's request, medical legislation, a number of letters pertaining to Executive Board meetings, answers to special questions, etc.

The State Auxiliary now has a membership of 1,674 members with thirty-three counties organized. Last year's membership was 1,554, showing an increase of 120 members, with two new counties organized—Blair and Tioga.

The prompt replies to letters sent to county presidents, secretaries, committee chairmen, and the Executive Board have helped greatly with our work of the year.

(MISS) JULIET WILSON, *Corresponding Secretary.*

The treasurer, Mrs. Howard C. Frontz, made her report in detail as follows:

RECEIPTS FOR THE YEAR 1928-29

Date	*County Auxiliary*	*Dues Received*	*Contributions to Benevolence Fund Received*
1928			
Oct. 11	Carbon (1927-28)	$8.00	
Nov. 5	Greene (1927-28)	15.00	
1929			
Jan. 9	Butler	8.00	
Mar. 1	York	3.00	
4	Beaver	67.00	
8	Bucks	16.00	
30	York	2.00	
May 8	Mifflin	18.00	$20.00
13	Fayette	51.00	150.00
16	Clearfield	21.00	
16	Franklin	20.00	
17	Chester	30.00	
20	Montgomery	48.00	
23	Allegheny	272.00	272.00
June 1	Lebanon	23.00	
1	Lancaster	57.00	100.00
8	Somerset	10.00	
11	Westmoreland	55.00	100.00
13	Washington	30.00	30.00
13	Potter	8.00	8.00
20	Lehigh	75.00	
20	Dauphin	100.00	300.00
20	Cambria	68.00	
25	Erie	78.00	78.00
25	Lycoming	50.00	100.00
28	Northampton	37.00	50.00
28	Montgomery	2.00	
28	Blair	38.00	
July 1	Greene	12.00	
1	Huntingdon	9.00	11.00
1	Philadelphia	269.00	
2	Berks	46.00	25.00
15	Bucks	1.00	
Aug. 15	Clinton	5.00	5.00
15	Carbon	8.00	
15	Cambria	7.00	
26	York	2.00	50.00
27	Lackawanna	105.00	182.00
Sept. 12	Philadelphia		100.00
17	York	6.00	
19	Beaver		200.00
23	Butler	22.00	
23	Tioga	1.00	
		$1,703.00	$1,781.00

CONTRIBUTIONS TO THE BENEVOLENCE FUND

County	*Amount*	*County*	*Amount*
Allegheny	$272.00	Montgomery*	$100.00
Beaver*	75.00	Northampton	50.00
Beaver	200.00	Philadelphia	100.00
Berks	25.00	Potter	8.00
Butler*	10.00	Washington	30.00
Cambria*	25.00	Westmoreland	100.00
Clearfield*	10.00	Westmoreland*	150.00
Clinton	5.00	York	50.00
Dauphin	300.00	Woman's Auxiliary of State of Pennsylvania*	100.00
Erie	78.00		
Erie*	4.00		
Fayette	150.00		$2,365.00
Greene*	10.00		
Huntingdon	11.00		
Lackawanna	182.00		
Mifflin	20.00		
Lancaster	100.00		
Lycoming	100.00		

*Contribution sent direct to Dr. Walter F. Donaldson, Secretary, Medical Society of the State of Pennsylvania.

Summary

1928		General Fund		
Oct.	9	Received from Mrs. Charles B. Forcey, former treasurer		$1,476.15
	11	Carbon County dues—1927-28		8.00
Nov.	5	Greene County dues—1927-28		15.00
1929				
Jan.	9	To date county auxiliary dues		1,680.00
Total				$3,179.15

1928		Expenditures		
Oct.	11	Transferred to Savings Fund..	$500.00	
Nov.	8	Alliance Printing Co., Atlanta, Ga.	352.00	
	8	Alliance Printing Co., Atlanta, Ga.	48.00	
	8	Evelyn B. Hower, Typing	8.00	
Dec.	7	Perry Printing Co., New Bloomfield, Pa.	10.90	
1929				
Mar.	4	J. G. Lesher & Son, Printing	5.25	
	5	Pa. Medical Journal (Periodic Health Examination Blanks)	12.75	
Sept.	30	Juliet Wilson, Cor. Secy., stamps, stationery, and typing	16.00	
	30	Mrs. Charles B. Forcey, Pres., railroad fare and pullman to Oregon	168.54	
	30	Mrs. Lawson, postage and incidentals	10.26	
	30	Woman's Club, Erie, Pa., 18 dinners (Ex. Board)	27.00	
	30	Mrs. H. C. Frontz, Treas., postage and incidentals	4.50	
	30	Mrs. Fred L. Adair, Treas., A. M. A. dues, 1,680 members at 25c	420.00	
	30	Y. W. C. A., rental, annual session, Erie, Pa.	130.00	1,713.20
Balance on hand October 1, 1929				$1,465.95

1928		Savings Fund	
Oct.	9	Received from Mrs. Charles B. Forcey, former treasurer	$319.37
	11	Transferred from General Fund	500.00
		Interest on fund to September 1, 1929	20.60
Total in Savings Fund at First National Bank, Huntingdon, Pa.			$839.97

Summary of Benevolence Fund

Received from county auxiliaries during the Auxiliary year	$1,781.00
Remitted to Dr. Walter F. Donaldson, Secretary, Medical Society of State of Pennsylvania	1,781.00

Mrs. Howard C. Frontz, *Treasurer.*

The chairman of the Auditing Committee, Mrs. J. H. Page, reported that the Treasurer's report was audited and found correct.

The chairman of the Committee on District Councilors, Mrs. Johnston, made the following report:

The September issue of the Pennsylvania Medical Journal contains reports of the councilors of the eleven districts of the State Medical Society. In reading these reports it was gratifying to find that many of the men had included in their report the activities of our Woman's Auxiliary with most favorable comments. But even yet, at the end of the fifth year of our organization, there are still some of the county medical societies which are not ready to sponsor an Auxiliary in their county. It has been the endeavor of your chairman this year to keep in touch with the councilors, and try, if possible, to get appointees as councilors in the districts not having them. That part of the work has been rather discouraging, and we have to report seven active districts, the remaining four as yet without councilors. But in the amount of work done and interest shown by those seven active, there is great encouragement. Several counties have been organized through the councilors and several kept alive which were otherwise languishing. Special meetings have been held at the same time and place that the Medical Society district meetings were held.

First District. This district is composed of Philadelphia County, and no councilor has been named. We know that they are at work and have an active organization, and hope some one will be named as councilor for the district in the near future.

Second District.—Mrs. Thomas Aiken had been the councilor, but finding it impossible to serve, Mrs. G. W. Miller, of Norristown, has recently been appointed in her place. We know that this district is wide awake, for there has just come to us a most interesting report of a meeting held at Valley Forge on September 12th. Eighty women were present. Mrs. Hunsberger, president-elect of the National Auxiliary, was in charge of the meeting. Drs. Appel and Sharpless were speakers. Lunch followed the meeting, and a pleasant social time was enjoyed.

Third District. From Mrs. M. I. Pentecost comes a rather discouraging report—no work and a request that her place be filled by some one else, as she feels unable to do the necessary work.

Fourth District. In this district not a county is organized, neither have we succeeded in securing a councilor.

Fifth District. Mrs. E. B. Marshall reports not much activity. She has been in touch with several unorganized counties, but as yet the Medical Societies in these counties do not see the necessity of a Woman's Auxiliary.

Sixth District. Word was received the early part of the spring from the councilor of this district, Mrs. A. W. Benson, that Blair County was organized. We had visited Blair County in the April preceding, and it was encouraging to know that our visit had not been in vain. Mrs. Benson has also been in touch with Huntingdon County, which, although it has been organized for several years, seemed inactive, and it is hoped that this county, by the time of the annual meeting, will be again in the front line.

Seventh District. The banner for active work must be given to Mrs. E. B. Lyon, councilor of this district. She has been in close touch with the Medical Society councilor of the district, and together they have visited several of the counties in their territory. Four of the six are organized—the last and newest one, Tioga County, being a little more than two months old. Her territory is scattered, and she has traveled approximately four hundred miles. Elk and Union Counties have not responded to repeated appeals, but she still hopes to have some word from them before the annual meeting.

Eighth District. In June we went to McKean County, to meet the members of the Medical Society and their wives in the interest of an Auxiliary in that county. From there we went to Warren County, and met and talked with Dr. Mitchell, the councilor of the district, who arranged interviews with a number of the physicians and wives in the interest of an Auxiliary to Warren County Society. As there would be no further meetings in either of these counties until September, no definite word has been received to date, but it is hoped that both counties may be ready to report progress at the Erie meeting. Erie County is the only organized county in this district.

Ninth District. In this district only two counties are organized—Butler and Indiana. No councilor has been appointed.

Tenth District. The first councilor district meeting to be reported was held at Pittsburgh, in November, 1928. This being the time we were in the midst of the campaign against the lowering of standards of medical education, Dr. Correll was the speaker and also Dr. Litchfield. More than forty women were present from Westmoreland, Beaver, and Allegheny counties, and an informal discussion of work in these counties was held after the speakers of the day had delivered their messages. Tea was served, and a social half-hour followed. As yet, Lawrence County has not responded to repeated efforts to interest them in forming an Auxiliary.

Eleventh District. In April, a meeting of this district was held in Johnstown. It was more a round-table group because of the small number present, but for that very reason was of great benefit, as there was a brisk interchange of helpful items on programs and methods of work. Mrs. J. J. Meyer also reports that five out of six counties are organized, and it is hoped since the reorganization of Bedford County Medical Society that an Auxiliary may be formed. She has visited three of the five organized counties, and been in touch with the others by correspondence and personal interviews.

Your chairman also visited Cambria County when the district meeting was held there. This work is only one and a half years old. There remains much to be done, but we feel that the district meetings are increasing the interest in the State organization. Leaders in various counties are being recognized; there is a greater opportunity for general discussion of work and methods, because of the close contact of the smaller group; and there is greater opportunity for the formation of friendships than can possibly obtain in large annual gatherings, because they are of necessity formal, entailing reports, elections, special addresses, etc.

To this report are appended the individual reports of the councilors for the year, also list of leaders in the districts.* No account has been kept of the number of letters written or telephone calls, or telegrams sent or miles traveled. It has been a great pleasure to do the work. I wish to thank each councilor for the assistance she has rendered and the time she has given to this work.

Bertha G. (Mrs. J. I.) Johnston, *Chairman.*

In the absence of the chairman of the Committee on Education and Publicity, Mrs. Lawson, the secretary read her report as follows:

From November, 1928, to August, 1929, inclusive, 124 county auxiliary reports have been published in the Pennsylvania Medical Journal. This increase in the number of reports over last year indicates an added interest and enthusiasm in the work. Owing to this fact, it was not necessary to select clippings from other state journals on their activities, as our own completely filled the space allotted to us, which shows that the individual counties are doing more. Dauphin, Erie, Lackawanna, Montgomery, Philadelphia, Washington, Fayette, and Westmoreland head the list, having sent in reports monthly.

Five very interesting and helpful messages were sent in by our State Auxiliary president, Mrs. Charles B. Forcey, and

*These reports will be published in the Pennsylvania Medical Journal for December.

her pet project, "periodic health examinations," together with the observance of a health campaign from March to May inclusive, were a splendid success. From the many reports, the auxiliaries have greatly assisted the work. Montgomery held a county-wide celebration, 5,000 cards having been distributed to parents of children entering school in September. Dauphin, Washington, Philadelpbia, Westmoreland, and many others have put on special programs.

Two new county auxiliaries have been organized: Tioga and Blair; Clinton and Somerset having been reorganized. Mercer, McKean, and Warren have sent in inquiries concerning organization.

Altogether, coöperation on the part of the auxiliaries has been splendid, but 100-per-cent efficiency in this department depends absolutely on the prompt reporting of all counties.

I wish to express my sincere appreciation to all those who have so willingly helped to make our column in the JOURNAL at least "worth while."

MILLIE BAIRD (MRS. E. KIRBY) LAWSON, *Chairman.*

Mrs. Pardoe, chairman of the Committee on *Hygeia*, made the following report:

For the year ended October 1, 1929, reports have been submitted by eighteen counties, as follows: Allegheny 32, Beaver 44, Butler 39, Cambria 13, Dauphin 9, Erie 25, Fayette 15, Lackawanna 15, Lancaster 3, Lebanon 19, Lehigh 14, Montgomery 16, Montour 12, Philadelphia 76, Potter 10, Washington 9, Westmoreland 7, York 3, total 361.

Allegbeny county reports thirty-one subscriptions to *Healthyland* and Butler county one. Tbere are thirteen counties from whicb no report on *Hygeia* has been made. We feel that this branch of the Auxiliary work is very important, and should be developed with the opening of the new year. Pennsylvania's record will fall far behind, unless every chairman and member of the county auxiliaries puts forth an extra effort to acquaint the public with the unusual educational values offered by *Hygeia.*

FLORENCE (MRS. EDWARD) PARDOE, *Chairman.*

In the absence of the chairman of the Committee on Public Relations, Mrs. Kerr, the secretary read her report as follows:

Our main efforts consisted in continuing the activities begun last year in behalf of supporting the maintainance of medical standards in Pennsylvania. We endeavored to interpret the aims of our local medical society, and to carry out the instructions of the militant leader of the cause, Dr. Correll. The triumph of his policies is well known and need not be dwelt upon in this report. Your committee addressed the various auxiliaries on this subject, and by reason of our strategic geographical position were able to keep in close touch with the progress of the bill while in the Legislature.

This committee recommends that proper resolutions be passed by the State Auxiliary congratulating Dr. Correll on his victory.

This committee had just begun intensive work in behalf of the State Cancer Institute, when it was advised that further efforts in support of this movement should not be made at this time.

Suitable notice was taken of the Newton Bill, designed to perpetuate the life of the Sheppard-Towner Act, and whatever efforts seemed possible in urging its defeat were made by this committee.

CATHERINE KRAUSE (MRS. J. DEWITT) KERR, *Chairman.*

Mrs. Walter Jackson Freeman, president-elect, presented the following report of the National Auxiliary meeting at Portland, Oregon:

The impression that I carried away from the national meeting was that of a vigorous adolescent, conscious of latent powers, but uncertain how and where to use them. He has not yet chosen the haven where he would be, still less has he chartered his course. He is hampered by his ignorance of the laws of navigation and of the handling of his ship, and in consequence, like all young things, he flounders about in his effort to progress, instead of steering confidently out to the open sea. But even in those few days one could feel the growth in control, the fixing of the goal, the steadying of tbe course, the assurance of coördination. The final open meeting of the Executive Board, with our new president, Mrs. Hoxie, in the chair, was an inspiring call to definite, constructive work.

I shall not attempt to give a detailed report of the discussions, nor of the social events and numerous daily excursions. Suffice it to say that these last were so alluring, the surrounding country so wonderful, that it was hard to stick to business, and that Portland hospitality lived up to the best traditions. I shall confine my report to the high points in national affairs, and the most helpful suggestions for the coming year's work.

First in interest to Pennsylvania is the choice of our dear Mrs. Hunsberger as national president-elect. I wish you could have heard that dear soul tell me, almost with tears in her eyes, how inadequate she felt, and how she accepted it only because she felt it her duty to Pennsylvania—and she really meant it. Later I spoke of the election with Mrs. Bunce, who said, "Mrs. Hunsberger is pure gold," a statement that needs no proof in Pennsylvania. I am sure you will all join, by a rising vote, in the promise I made Mrs. Hunsberger, on the spot, of our undivided and unlimited coöperation and loving support. Long may she wave!

The national membership is now over 10,000, with 31 states organized; Pennsylvania first, with 1,674 (paid-up) members. The delegates registered for the convention numbered 190, and many others attended the meetings. An American Medical Society in Vienna reported a woman's branch started in 1903, its activities mainly social. Our good wishes were cabled them.

The convention was addressed by the outgoing president of the American Medical Association, Dr. William S. Thayer, of Baltimore; the incoming president, Dr. M. L. Harris, of Chicago; Dr. J. W. Upham, chairman of the National Advisory Council; and Dr. E. H. Cary, Trustee of the American Medical Association. He it is who first proposed to the House of Delegates the founding of a Woman's Auxiliary, and to whose counsel and encouragement we largely owe our organization. All these gentlemen spoke in high terms of the field of usefulness opening before us, and begged us to continue our activities. The lines they particularly stressed were education, first of ourselves, then of the public, on desirable healtb legislation; the support of animal experimentation; the essentials of public-health education in county work; the preparation of the soil for this work, and the follow-up.

The most important national business was the acceptance of the new By-Laws, on which Mrs. Fishbein and her committee have labored unremittingly for over a year. They are admirable in clarity and precision, and should prove of greatest value in establishing orderly procedure. The vexed question of eligibility to membership was not even discussed, but was very properly left to the discretion of the county medical societies, where it belongs. The one point on which any real discussion arose was that of federation with women's clubs. This was forbidden, because the American Medical Association is firm in opposing it, fearing the use of the Auxiliary's name for undesirable purposes.

The present national dues of twenty-five cents per member are absurdly low, and totally inadequate to the important work in hand. This was clearly shown in the discussion of the budget, the first to be presented to the National Auxiliary. It was felt, however, that no increase could be made at this time, as the dues of many county auxiliaries are only $1.00, from which both state and national dues must be subtracted before meeting any county expenses.

In *Hygeia* subscriptions Pennsylvania stood second, with 232 subscriptions—to my mind, hardly a brilliant showing, although Mrs. Bunce pronounced it "splendid." The prize offered a year ago has been withdrawn, but we are asked to continue our efforts.

Medical history received much attention, and Mrs. Red, of Texas, who is deeply engaged in this work, spoke enthusiastically and persuasively of its importance and value. It is imperative to assemble the records of early physicians and their activities before they are lost forever, and to preserve contemporary data. There is no need to stress this point to such of you as are genealogists, and I recommend it particularly to your attention. It is one of the very few subjects of equal importance to every county of this country.

Various forms of aid work were reported, such as scholarships in medical schools and fellowsbips for graduate work, as well as our own particular object of aid to aged and infirm physicians and their families. Numerous more general eleemosynary activities were reported—prenatal clinics, hospital funds, etc.

The auxiliaries are urged to coöperate with local organizations in every possible way, but as a preliminary step, to educate these organizations as to the real truth in medical matters and how best to attain the desired ends. When any discussion on medical subjects is staged, make sure of the professional standing and competence of the speakers, and if it is a debatable question, have both sides presented at the meeting at which action is to be taken.

The question of keeping our members informed of general Auxiliary affairs was thoroughly canvassed. It appears that most state and county journals give the Auxiliary space, so that if these come to the *home*, instead of to the office, tbe wives have a chance to read them. Many members said they now read the medical journals from cover to cover, and all are urged to form this habit. Publicity chairmen were reminded that a few terse, well-written paragraphs on really interesting topics are quite sure of acceptance by editors. The national publicity chairman should be kept fully posted on state affairs, and will in return send information to state chairmen of important events throughout the country.

An important suggestion was the holding of small round-table conferences at annual meetings. Many subjects are of particular interest to a small group of members, yet are not of enough national importance to warrant giving them much time on the program. Opportunity should be given such members to discuss their problems thoroughly in a small, interested group, and such conferences will undoubtedly be arranged for another convention.

Too much cannot be said of the devotion, ability, and truly heroic persistence of our retiring president, Mrs. Allen H. Bunce, of Atlanta. For four years a national officer, she has labored untiringly, and with a breadth of vision all too rare, to build up a great organization equipped to do a work worthy of its name. During most of this time she has been a sick woman, working for weeks at a time from her bed, and as she now retires from active work, we wish her Godspeed and a well-earned rest.

Equally fortunate are we in our new president, Mrs. George H. Hoxie, of Kansas City, a woman of high and far-reaching ideals, to which her great experience and practical knowledge of methods of work promise large fulfillment. Public-health education is the keynote of her plans, and my chief ambition for the coming year is to carry out her suggestions as far as they fit our State conditions. Her foundation stone is the

county. No two counties have the same problems, so in national and state meetings we can deal only with *principles.* Rules and methods applicable to local needs must be established by each county auxiliary. In Missouri, Mrs. Hoxie goes every so often to the state health officer and asks whether there are any odd jobs that the Auxiliary can do. She then gets from this official source definite suggestions for the various counties, printed information in an envelope marked with the county's name, such and such literature for this county, something quite different for that, but in each case suitable and helpful for the suggested work. Never does the Auxiliary interfere, or take up work on its own initiative, but always at the request and with the support of the proper officials. In this way friction is avoided, an *entente cordiale* is established, and a worth-while, constructive program is put across. Precisely the same methods are applicable to county work, and will give the same results.

Imagine what such a program will mean to our beloved country, with all of our thousands of county auxiliaries working seriously and with coördinated effort toward this glorious object. When that happy day arrives, as come it surely will, we shall be in truth a worthy Auxiliary to the noblest of all professions.

CORINNE KEEN (MRS. WALTER JACKSON) FREEMAN.

Mrs. Bowser, the chairman of the Committee on Registration, reported fifty-one delegates registered.

The recording secretary reported on the periodic health examinations' competition, and the president awarded the prize to Montgomery County.

The county reports were presented, but lack of space prevents their publication until the December number of the PENNSYLVANIA MEDICAL JOURNAL.

On motion, the reports were accepted as read.

Brief addresses were made by Mrs. S. C. Red, of Houston, Texas, Dr. Thomas G. Simonton, of Pittsburgh, Dr. William T. Sharpless, of West Chester, and Dr. Walter F. Donaldson, of Pittsburgh, respectively president, president-elect, and secretary of the Medical Society of the State of Pennsylvania. Adjournment followed.

ROSEBUD TESCHNER (MRS. MYER) SOLIS-COHEN,
Recording Secretary.

General Meeting

The general meeting, held October 2d, at 9.30 a.m., was called to order by the president, Mrs. Charles B. Forcey. In the absence of the secretary, Mrs. David B. Ludwig was appointed secretary pro tem.

Mrs. Robert H. Jeffrey, chairman of the Committee on Resolution, read the report of this committee as follows:

(1) WHEREAS, The Woman's Auxiliary to the Medical Society of the State of Pennsylvania is in fifth annual session assembled, and the Woman's Auxiliary to the Erie County Medical Society has extended to all delegates and visitors such delightful hospitality and prepared such splendid entertainment; therefore, be it

Resolved, That we, the delegates and visitors in session assembled extend to the hostess Auxiliary of Erie County our sincerest thanks and appreciation for the gracious and cordial hospitality extended to us and for all arrangements made for our comfort and entertainment.

(2) WHEREAS, The report of the Committee on Public Relations has recommended the following resolution; therefore, be it

Resolved, That the heartiest congratulations of this Assembly be extended to Dr. Paul R. Correll on his victory, and a copy of this resolution be sent to him.

(3) WHEREAS, The following resolution has been recommended by the Executive Committee; therefore, be it

Resolved, That widows of physicians in good standing in the Medical Society of the State of Pennsylvania at the time of their decease be eligible for active membership.

(4) WHEREAS, The following resolution is necessary in order to conform to the regulations of the National Auxiliary; therefore, be it

Resolved, That the secretary be instructed to write to the Medical Society of the State of Pennsylvania requesting that the Society appoint a committee of five of its members to act as an advisory committee to the State Auxiliary; and that projects of any kind be not undertaken without the advice and consent of this committee.

(5) WHEREAS, The following resolution has been recommended by the Executive Committee; therefore, be it

Resolved, That the following committees be made standing committees: Committee on Archives, Committee on Periodic Health Examinations, Committee on Legislation, and Committee on By-Laws.

(6) WHEREAS, The following resolution has been recommended by the Executive Board; therefore, be it

Resolved, That our fiscal year shall begin September 1st and end August 31st.

Respectfully submitted,

ELIZABETH B. (MRS. R. H.) JEFFREY, *Chairman,*
BERTHA G. (MRS. J. I.) JOHNSTON,
(MISS) ELLA SIMPSON.

On motion, it was decided to vote on each resolution separately, with the following results:

Resolution 1 was accepted by a rising vote of thanks.

Resolution 2 was accepted by a rising vote in congratulation of Dr. Correll.

Resolution 3. It was moved by Mrs. Johnston, seconded by Mrs. Low that the resolution be accepted. After some discussion by Mrs. Horger of Scranton as to whether widows must be members of the Auxiliary at the time of the husband's decease, and as to whether daughters were eligible under the same conditions, this resolution was carried by a majority vote, there being one dissenting vote.

Resolution 4 was carried unanimously on motion by Mrs. Appel seconded by Mrs. Herr.

Resolution 5 was carried unanimously on motion by Mrs. Piersol seconded by Mrs. Nicodemus.

Resolution 6 was carried unanimously on motion by Mrs. Meyer seconded by Mrs. Trimble.

Resolution 7 was carried unanimously on motion by Mrs. Gangewere seconded by Mrs. Appel.

The report of the Nominating Committee was presented by Mrs. Weaber, chairman, as follows: *President-elect,* Mrs. John F. McCullough, Allegheny County; *vice-presidents—first,* Mrs. T. Kenneth Wood, Lycoming County; *second,* Mrs. Theodore B. Appel, Lancaster County; *third,* Mrs. Clarence R. Phillips, Dauphin County; *directors for three years,* Mrs. Charles B. Forcey, Beaver County, Mrs. Charles G. Strickland, Erie County; *recording secretary,* Mrs. J. I. Johnston, Allegheny County; *treasurer,* Mrs. Howard C. Frontz, Huntingdon County.

MRS. THOMAS H. WEABER, *Chairman,*
MRS. W. S. BRENHOLTZ,
MRS. THEODORE B. APPEL,
MRS. CHARLES H. SMITH.

As there were no nominations from the floor, the report of the Nominating Committee was accepted by a rising vote.

The report of the auditors on the treasurer's accounts was accepted.

Mrs. S. C. Red, of Houston, Texas, addressed the meeting on "Surgery of the American Revolution."

Miss Katharine A. Pritchett, Consultant in Administrative Nutrition, Department of Welfare, Common-

wealth of Pennsylvania, presented an illustrated lecture on "Nutrition."

Mrs. Forcey presented the gavel to Mrs. Freeman with a brief address, and asked that the other officers rise so that the Auxiliary might know the group of officials.

Mrs. Freeman graciously accepted two corsages, one from the State Auxiliary and one from her own county auxiliary, Philadelphia. She spoke briefly of her hopes, aims, and vision for the Auxiliary. "Everything I have, everything I am," said Mrs. Freeman, "depends upon the medical profession."

At the close of her talk, Mrs. Freeman declared the meeting adjourned.

MARGARET OSBORN (MRS. DAVID B.) LUDWIG,
Recording Secretary pro tem.

Round-Table Meeting

Sixty-five women were present on October 3d at 11 a.m. at the call of the president for an hour of conference before returning to their respective auxiliaries.

Mrs. Freeman announced the chairman of the standing committees.

Mrs. Red, of Houston, Texas, who was our guest during the session, expressed her thanks for the hospitality extended to her.

Mrs. Freeman briefly outlined her plans for the year, speaking of the duties of the committees and what they would like to accomplish.

A letter from Dr. Appel, State Secretary of Health, was read stating the need of more and better work to be done along the line of dental hygiene, prenatal work, and "well baby" work in the rural districts.

The district councilors as well as the county auxiliaries were urged to send monthly reports to the Publicity Chairman. Dr. Correll will have more work for the women, so the legislative committees must not think that their task is finished.

An open discussion followed, and the questions asked seemed to indicate that more round-table discussions would be welcome.

BERTHA G. (MRS. J. I.) JOHNSTON,
Recording Secretary.

Medical News

Deaths

MRS. FANNIE F. LEFFMAN, wife of Dr. Henry F. Leffman, Philadelphia; October 5, aged 85.

THOMAS L. KANE, M.D., of Kane; Jefferson Medical College, 1886; aged 66; September 11.

MRS. ETTA ROSENBERGER, wife of Dr. Randle C. Rosenberger, of Philadelphia; August 22.

ERNEST Z. BOWER, M.D., of Scranton; Jefferson Medical College, 1895; aged 59; August 3, of uremia and acute nephritis.

WILLIAM S. MCCREIGHT, M.D., of Blairsville; University of Pittsburgh School of Medicine, 1891; aged 65; September 15.

MRS. PEARL WEINSTEIN, wife of Dr. Morris A. Weinstein, of Philadelphia; aged 48; October 16, from asphyxiation by gas.

MABEL H. PEARSON, M.D., of Atlantic City, N. J. (formerly of Philadelphia); Woman's Medical College, 1920; aged 46; recently.

WILLIAM D. HYSKELL, M.D., of Madera; University of Pennsylvania School of Medicine, 1874; Civil War veteran; aged 83; August 10, of valvular heart disease.

JOSEPH S. SIMSOHN, M.D., of Philadelphia; Jefferson Medical College, 1874; one of the first physicians to serve in the Jewish Hospital in Philadelphia; aged 77; September 18.

WILLIAM L. SCOTT, M.D., of Joffre; University of Pennsylvania School of Medicine, 1895; aged 59; August 9, at the Mercy Hospital, Pittsburgh, of cerebral hemorrhage following an automobile accident.

H. AUGUSTUS BACON, M.D., of Philadelphia; Medico-Chirurgical College, 1895; lineal descendant of Sir Francis Bacon; former associate professor of operative surgery at Temple University and a surgeon of the Garretson Hospital; a graduate of the Philadelphia College of Pharmacy in 1893; aged 61; October 14, after a short illness.

Births

TO DR. AND MRS. MERRILL B. DEWIRE, of Reading, a son, July 12.

TO DR. AND MRS. RALPH H. HENRY, of Allentown, a daughter, Joanne, September 22.

TO DR. AND MRS. HENRY V. GRAHN, of Philadelphia, a son, David Victor Grahn, August 28.

Engagements

MISS BERTHA M. LESSY and DR. ALEXANDER STERLING, both of Philadelphia.

MISS DOROTHY FRAMPTON HODGE, of Radnor, and DR. D. STEWART POLK, of Philadelphia.

MISS HELEN S. CHANCE, daughter of Dr. and Mrs. Burton Chance, and Mr. William Sellers, both of Radnor.

MISS ELIZABETH BAILEY MACHEN, of Ardmore, and MR. JOHN LEWIS THOMAS, son of Dr. and Mrs. J. Quincy Thomas, of Conshohocken.

MISS HARRIET ELY MARSHALL, daughter of Dr. and Mrs. George Morley Marshall, of Philadelphia and New Hope, and Mr. Robert Seabury Wentworth, of Germantown.

Marriages

MISS SARA JEANETTE STOUT, of Philadelphia, to DR. JAMES ROSS VEAL, senior intern at Pennsylvania Hospital, August 30.

MRS. ELIZABETH READING HUGHES, of Haverford, to DR. LINWOOD LAYTON RIGHTER, of Philadelphia, August 26, at Seaside Park, N. J.

MISS ANN PACKARD, daughter of Dr. and Mrs. Francis R. Packard, of Philadelphia, to Mr. Elliston Perot Bissel, Jr., also of that city, October 26.

MISS CAROL VIRGINIA HEMINGTON, daughter of Dr. and Mrs. J. G. Hemington, of Uniontown, to Mr. Edward Locke Kemp, of McKeesport, October 12.

MISS ROSEMARY CECELIA HAMILTON, daughter of Dr. and Mrs. William A. Hamilton, of Merion, to Mr. Charles A. Mueller, of Philadelphia, October 17.

MISS ADELAIDE MCCULLOH JEFFERYS, daughter of Dr. William Hamilton Jefferys, of Rosemont, to Dr. Thomas Cresson Garrett, of Germantown, October 4.

Miscellaneous

DR. JOHN W. GORDON, of Clearfield, is convalescing from an attack of pneumonia.

DR. GEORGE C. WEBSTER, JR., of Chester, spent the summer in Vienna doing postgraduate work.

THE NEW $280,000 MATERNITY WING of the Lancaster General Hospital was dedicated on October 5.

DR. AND MRS. JOHN S. EYNON and son David, of Chester, recently sailed for a vacation in Europe.

THE CORA ARNOLD SWOOPE MATERNITY UNIT of the Clearfield Hospital was formally opened on August 29.

DR. AND MRS. C. E. G. SHANNON, of Ardmore, have returned to their home after spending the summer in Europe.

DR. AND MRS. J. H. SLAUGHTER and their son, Mr. Herbert Slaughter, of Ardmore, have returned from Europe.

DR. AND MRS. BURTON CHANCE and their daughters, of Radnor, recently returned form Europe, where they spent the summer.

DR. ALBERT L. USSETT, of Chester, has been critically ill following an operation in the Methodist Hospital, Philadelphia.

PHILADELPHIA HAS BEEN CHOSEN as the scene of the 1930 Congress of the College of Surgeons, which probably will be held during October.

THE FORTY-FOURTH ANNUAL COMMENCEMENT of the St. Luke's Hospital Training School for Nurses, Bethlehem, was held on October 18. There were eleven graduates.

DR. JAMES C. SMALL, director of laboratories, Philadelphia General Hospital, resigned September 1 to engage in private practice.

DR. MORRIS H. GENKINS, of Norristown, sailed on October 10 for Vienna, where he will take a course in surgery and surgical pathology.

DR. AND MRS. HOWARD F. HANSELL, who have been spending the past nine months in Europe, have returned to their home in Philadelphia.

THE FOURTEENTH ANNUAL CLINICAL SESSION of the American College of Physicians will be held at Minneapolis, Minn., February 10-14, 1930.

DR. GEORGE H. CROSS, of Chester, has been appointed assistant professor of ophthalmology in the Graduate School of the University of Pennsylvania.

DRS. T. E. WILLS AND B. K. THOMAS, of Pottstown, and Dr. Robert W. Randall, of Royersford, recently completed a month's study at the Mayo Clinic.

THE FOURTEENTH ANNUAL FALL MEETING of the Pennsylvania Radiological Society was held at the Penn Stroud Hotel, Stroudsburg, on Friday, October 25.

AT A RECEPTION GIVEN BY THE MEDICAL CLUB of Philadelphia, October 18, Dr. Hofrath Ernst Fuchs, noted ophthalmologist of Vienna, was the guest of honor.

DR. C. S. TOMLINSON, of Milton, recently returned from a six-weeks' tour abroad, during which time he visited the clinics of Vienna and other European cities.

THE MARTIN MALONEY MEDICAL CLINIC of the University of Pennsylvania was opened for use September 27. The dedication address was delivered by Dr. Alfred Stengel.

DR. LEWELLYS F. BARKER, of Johns Hopkins University School of Medicine, succeeds Dr. Ray Lyman Wilbur as chairman of the Medical Council of the U. S. Veterans' Bureau.

DR. P. N. K. SCHWENK, of Philadelphia, aged 76 years, was recently successfully operated upon for chronic appendicitis and has made a good recovery.

HAHNEMANN MEDICAL COLLEGE, Philadelphia, receives $5,000 by the will of Miss Pauline L. Neidhard, daughter of Dr. Charles L. Neidhard, pioneer homeopathic physician.

DR. HORATIO C. WOOD, JR., and his daughter, Miss Florence L. Wood, who have been spending two months traveling through Europe, have returned to their home in Philadelphia.

DR. L. M. HOFFMAN, of Williamsport, has enrolled in the Graduate School of Medicine, University of Pennsylvania, for an extended course in surgery. The course will require two years.

DR. LEO I. BOWMAN, of the Philadelphia General Hospital, Byberry, has qualified for appointment as assistant resident physician, Bureau of Hospitals. The compensation is $1,950 a year and meals.

PROFESSOR JOSEPH BARCROFT, professor of physiology in Cambridge University, England, delivered the Mary Scott Newbold Lecture at the College of Physicians, Philadelphia, on October 2, at 8.30 p. m.

AFTER SPENDING SOME TIME studying gynecology and obstetrics in New York City, Cleveland, and Rochester, Minn., Dr. Donald B. McHenry has returned to Danville and is again in active practice.

ANNOUNCEMENT WAS MADE in September at the Woman's Medical College of Pennsylvania of a gift of $1,000, to be repeated yearly, for preventive medicine by Dr. Margaret P. Kirk, of Richmond, Va.

DR. ROY E. NICODEMUS, of Danville, who is taking a course in obstetrics in New York, will have charge of the obstetrical department of the Geisinger Memorial Hospital, Danville, upon his return.

DR. WILLIAM W. KEEN, of Philadelphia, was elected the first honorary member of the International Congress of Surgery at the triennial meeting in Warsaw, Poland, in July. The congress will meet next in Spain in 1932.

BY THE WILL OF FRED H. STERNER, the Allentown Hospital Association receives $20,000; the Sacred Heart Hospital, Allentown, $20,000, also the income of a fund of $50,000; and the Allentown Hospital the income of a fund of $50,000.

DR. THOMAS V. MURTO, of Middletown, is taking a nine-months' course in otolaryngology at the Graduate School of the University of Pennsylvania. Last year Dr. Murto completed a similar course in ophthalmology in the same University.

WHEN THE FIRST NATIONAL BANK of Beech Creek was robbed of over $12,000 recently by three bandits, Dr. George Tibbens, of Beech Creek, was one of the parties responsible for their capture. All the money was recovered and one bandit was killed.

THE NURSES' TRAINING SCHOOL of the Kane Summit Hospital, Pennsylvania, was discontinued September 28, as the modern requirements for the training of a nurse could not be met by the hospital. The pupil nurses were transferred to the General Hospital, Bradford.

DRS. BERNARD STEIN AND WILLIAM K. BHATTA have qualified before the Civil Service Commission of Philadelphia for appointment as assistant resident physician, Bureau of Hospitals, with assignment to the Municipal Hospital. The salary is $2,500 per annum.

DR. THOMAS M. LOGAN fills the vacancy on the faculty of the School of Dentistry of Temple University created by the resignation of Dr. Charles Scott Miller from the professorship of bacteriology. He will be assisted by Dr. George K. Byers.

DR. EMANUEL LIBMAN, of Mount Sinai Hospital, New York, addressed the Pittsburgh Medical Forum on October 26, at 8.45 p. m., at the Concordia Club, University Place. His subject was "Observations on Angina Pectoris of Various Origins."

ALBERT ALLEMANN, M.D., of Washington, D. C., desires to inform the subscribers of the *Medical Interpreter* that he resigned as editor of that publication in December, 1928, and is no longer responsible in any manner for the actions of its promoters.

The War Department plans intelligently to test the value of vaccination to prevent rabies. At Forts Ethan Allen, Sheridan, Riley, and other places, semi-annual vaccination of all dogs will be compulsory for a period of ten years, and statistics will be gathered.

A program for the rebuilding of the Frankford Hospital, Philadelphia, at a cost of $1,500,000 has been completed. The new building, a nine-story structure for which plans have been prepared, will be erected early next year. Two hundred beds will thus be added to the present hospital facilities.

Plans have been completed for a five-story addition to the Presbyterian Hospital, Philadelphia, at a cost of approximately $800,000. A permit has been issued for a two-story building to be erected for the School of Occupational Therapy, northeast corner of 19th and Lombard Sts., Philadelphia, at a cost of about $70,000.

Jefferson Medical College is bequeathed a collection of surgical and medical implements and instruments, including all cabinets and containers pertaining to them, and a surgical and medical library containing many valuable and rare works and pamphlets, by the will of Dr. S. MacCuen Smith, of Philadelphia, who died suddenly on September 14.

A new home for nurses of the Brownsville General Hospital was dedicated on September 26. The structure was erected at a cost of $150,000. A bequest from the estate of Joseph H. Horner of East Millsboro made possible the "Horner Memorial Home" for nurses. The four-story structure will accommodate a staff of 60 student nurses.

The Pennsylvania State Board examinations for licensure will be held in Philadelphia beginning January 7, 1930, and ending January 11, 1930. During the first three days the written examination will be conducted in the medical laboratories of the University of Pennsylvania, and during the last two days the bedside examination will be given in various Philadelphia hospitals.

"Of some 200 cases of infantile paralysis treated in Ontario this year with blood serum, fully 95 per cent have completely recovered," says Hon. Dr. Forbes Godfrey, Minister of Health. "This means that there are nearly 200 citizens of the providence who will be alive and well instead of dead or paralyzed," said Hon. Dr. Godfrey. "The cost has been only $1,500."

An expansion program which contemplates the establishment of industrial health clinics in five additional plants by the close of the year was initiated October 1 by the Philadelphia Health Council and Tuberculosis Committee. The work of the council has proved successful in twenty-five plants, fifteen of which have now assumed management and maintenance of the work themselves.

On October 24, the members of the Gloucester County Medical Society, New Jersey, visited Jeanes Cancer and Diagnostic Hospital at Fox Chase, Philadelphia, and listened to a special program on "The Early Diagnosis of Cancer." After being entertained at luncheon, the visitors were conducted through the hospital, which is devoted mainly to the study and treatment of cancer.

Dr. Leopold Vaccaro, a former instructor in the School of Medicine, University of Pennsylvania, recipient of an honorary degree of doctor of medicine from the University of Rome, and twice decorated by the King of Italy, was honored on October 17 by the Golden Rule Club on the occasion of his appointment to the surgical staff of the Philadelphia General Hospital. About 300 friends attended a testimonial banquet at the Adelphia Hotel.

The annual meeting of the Association of Surgeons of the Pennsylvania Railroad was held at Virginia Beach, October 11 and 12. Dr. Orlando H. Petty, of Philadelphia, is president of the Association, and Dr. Joseph Scattergood, of West Chester, is secretary. Drs. John B. Deaver and Henry D. Jump, both of Philadelphia, and Dr. William Gerry Morgan, of Washington, president-elect of the American Medical Association, were among those who read scientific papers.

The *American Journal of Stomatology*, under the auspices of the practitioners interested and affiliated with the stomatologic movement in America, made its first appearance in October, 1929. It will offer contributions on the fundamentals of the specialty as well as those dealing with medical, surgical, and reconstructive therapy. There will be an economics section, a lay section setting forth the positive side of oral health, and other features such as abstracts, book reviews, an open forum, and news of societies.

The Skin and Cancer Hospital of Philadelphia has organized a Clinical Society with the following officers: president, Dr. Albert Strickler; vice-president, Dr. J. Douglas Morgan; secretary, Dr. Mulford K. Fisher. Meetings will be held monthly and will include a résumé of the clinical activities of the institution. Case and patient presentations of both ordinary and exceptional dermatological conditions encountered in the clinics of the hospital will be made and a report given of the investigative researches that are being actively carried on.

Ground was broken, October 14, for the new building of the medical school of Temple University, Philadelphia, by the president, Dr. Charles E. Beury. The following additions have been made to the faculty: Dr. Chevalier Jackson, professor of bronchoscopy and esophagoscopy; Dr. Alfred E. Livingstone, professor of pharmacology; Dr. Max H. Bochroch, who resigned from the chair of neurology, became professor of psychiatry; Dr. N. W. Winkelman, professor of neurology; Dr. Temple Fay, professor of neurosurgery; Dr. Matthew S. Ersner, professor of otology (Dr. Henry J. Off, the former occupant, being made emeritus professor of otology); Dr. William C. Pritchard, professor of histology and embryology; and Dr. Thomas Klein, professor of applied therapeutics.

Dr. Judson Daland, of Philadelphia, who recently returned from a six-months' tour of the African disease area, was tendered a reception October 15 by the Sydenham Coterie at the Penn Athletic Club. Dr. Daland believes that coördination of effort by all the governments concerned is the best means of effectively combating sleeping sickness in Central and Southern Africa. The countries having holdings in the infested area have subscribed generously and are working actively toward the elimination of the tsetse fly, the only known carrier of the sleeping-sickness parasite, but there is much duplication of effort which might be avoided by some plan for coöperation. This is true in research work all over the world, more especially in the study of cancer.

The Pennsylvania Department of Public Instruction has planned a series of conferences in different centers throughout the State to discuss the important and immediate problems which arise in connection with school nursing. The conferences will be of special value to school nurses, school physicians, school superintendents, supervising principals, boards of education, parent-teacher and child-welfare organizations. The several regional meetings which will be under the general supervision of W. G. Moorhead, State Director of Health and Physical Education and the direct supervision of Mrs. Lois L. Owen, State Supervisor of School Nursing, are scheduled as follows: October 4, Erie; October 11, Williamsport; October 18, Scranton; November 1, Rochester; November 22, Pittsburgh; December 4, Reading; December 6, Haverford; and January 10, Harrisburg.

A second national essay contest on a health topic for junior and senior students of high schools throughout the country is being sponsored by the Gorgas

Memorial Institute, 1331 G Street, N. W., Washington, D. C. There will be three prizes for winners of the national contest. The first prize will consist of $500 in cash with $250 travel allowance to Washington, D. C., to receive the prize; the second prize winner will receive $250 in cash; and the winner of the third prize will receive $100 in cash. State winners will receive $20 in cash and the winners of the high school contest will receive a bronze Gorgas Medallion. The subject selected is "The Gorgas Memorial; Its Relation to Personal Health and the Periodic Health Examination." All papers must be received at the headquarters of the Institute by midnight, December 10.

A NEW ORGANIZATION known as the Iodine Educational Bureau has opened offices at 64 Water Street, New York City. Mr. J. J. Nichols is Director of the Bureau, which is supported by the Iodine Producers Association of Chile, South America. The Bureau will collect and disseminate dependable information about iodin and iodin compounds. A large amount of research work will be undertaken, a fellowship already being established at Mellon Institute, and several other fellowships will shortly be established at other institutions to follow up special lines of research investigation. The Bureau will be ready to coöperate at all times with others doing research work on the application of iodin in agriculture, industry, animal husbandry, and in the professions of medicine, dentistry, pharmacy, and veterinary medicine.

DR. OSKAR FRANKL, noted gynecologist and endocrinologist of Vienna, was the guest of honor at a dinner tendered by the Woman's Medical College and attended by some 800 physicians and their friends in the Bellevue-Stratford, Philadelphia, September 23. The feature of the evening was an illustrated lecture on Vienna delivered by Dr. Frankl, who demonstrated authoritative knowledge of the history of the famous city. He is the possessor of numerous collections of rare maps, artistic treasures, and portraits of early Viennese leaders. At the close of the lecture he was presented with a check from the assembled guests by Mrs. James Starr, president of the corporators of the Woman's Medical College, to be used in work among the poor of Vienna. Chief Justice Robert von Moschzisker presided at the dinner and Mayor Mackey welcomed Dr. Frankl on behalf of the city. As a teacher Dr. Frankl has had more than 4,000 Americans in his classes in the University of Vienna.

THE ACHIEVEMENTS MADE in the medical and allied professions during the past hundred years through the aid of pure and applied science may be graphically shown at the Chicago World's Fair centennial celebration to be held in 1933, according to the *Medical Journal and Record*. Leading authorities in these professions have been invited to serve on the National Research Council Science Advisory Committee to the Fair. The medical men serving on the general committee include Prof. R. R. Bensley, of the department of anatomy of the University of Chicago; Dean Arthur D. Black, of the dental school of Northwestern University; Dr. Frank Billings; Prof. Preston M. Hickey, of the Medical School of the University of Michigan; Prof. Stanhope Bayne-Jones, of the School of Medicine and Dentistry of Rochester University; Prof. Fay-Cooper Cole, of the department of anthropology of the University of Chicago; and Prof. Harvey A. Carr, of the department of psychology of the University of Chicago.

THE NATIONAL GUARD AND THE RESERVES, THIRD CORPS AREA. First Lieut. David A. Bryce, Med. Res., Philadelphia, has been assigned to the 79th Division.

The following Reserve officers have been relieved from assignment as indicated, there being no suitable vacancies under the procurement objective for their assignment: From the Field Artillery group—Major Charles J. Cole, Jr., Elkins Park; Major David R. Morgan, Philadelphia; Major Philip J. Sheridan, Oil City; Major Robert F. Trainer, Williamsport; and Major William W. Woods, Boalsburg. From 315th Observation Group Headquarters., Fifth Army, Major David Kaufmann, Altoona. From 312th Tank Battalion, 2d Three Fields Armies, Major Waldo W. Hull, Philadelphia.

The following Reserve officers, having accepted reappointment in the O. R. C. without the privilege of assignment or active duty, have been relieved from assignment to units of the Org. Res. as indicated: From 79th Division—Major John P. O'Brien, Philadelphia.

The following Reserve officer has been assigned as indicated: To 99th Division—First Lieut. Alfred B. Sigmann, Mayview.

First Lieut. Everett H. Tomb, Medical Reserves, Philadelphia, having moved to the Sixth Corps Area, has been relieved from assignment to the 34th Evacuation Hospital.

A CIRCLE OF FIRST-AID STATIONS thrown around Philadelphia and the four adjoining counties and placed at dangerous intersections of main highways leading into the city is the newest phase of local Red Cross activity. It is an effort to cope with the mounting mortality figures caused by traffic accidents which arise from the passage in and out of the city each day of more than 250,000 automobiles. This practical measure, which carries the preventive and emergency work of the Red Cross into the field where accidents constantly occur, was introduced in July by the Southeastern Pennsylvania Chapter, the first Red Cross in the country to undertake a comprehensive effort of this character. Simultaneously, officials of the local Red Cross offered free instructions in first-aid treatment to police and volunteer firemen in the four counties which, with Philadelphia, compose the Southeastern Pennsylvania Chapter—Bucks, Delaware, Montgomery, and Chester. As a result, thirteen local police organizations have received instruction in first aid. The first-aid stations are, in some instances, in charge of police and firemen or civilians who are volunteers.

To date twenty-three first-aid stations have been established in garages, service stations, fire stations, car barns, parish houses, automobile clubs, and in two instances in the headquarters of the State highway patrol. This help in time of accident covers the Lincoln Highway from Morrisville to City Line on one side, and on the other from Glen Loch to City Line. The Baltimore pike is covered by Red Cross stations from City Line to the State line of Maryland, and officials of the local Red Cross ultimately hope to have between fifty and one hundred first-aid stations so that all dangerous points on the main traffic arteries will be protected. "Ultimately it is the hope of the chapter to have this cordon of stations backed up by the local highway police and other available local units, all of whom will have been well instructed in first aid," said Colonel J. Franklin McFadden, chairman of the local Red Cross. "This instruction is given by the Red Cross free of charge, and the extent of service must be dependent, of course, upon the coöperation of the local authorities."

BOOK REVIEWS

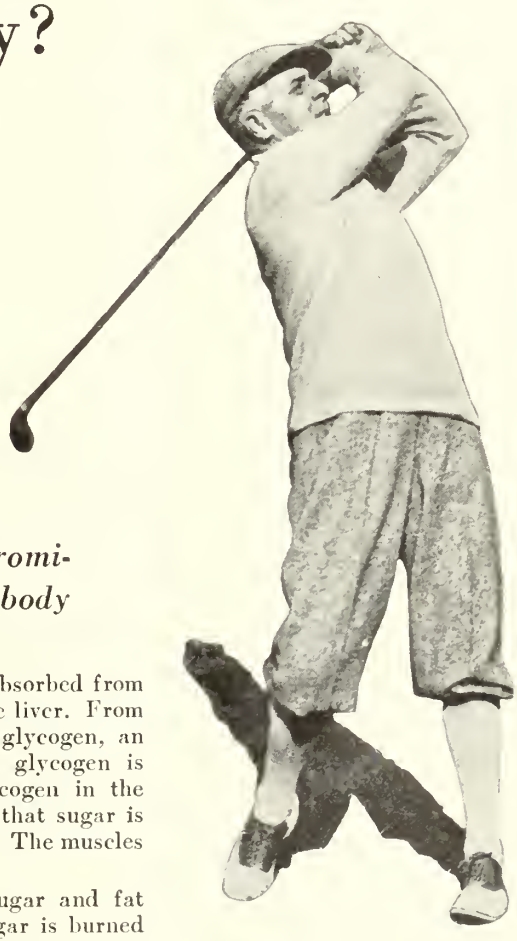
From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

THE SURGICAL CLINICS OF NORTH AMERICA. Volume 9, number 3 (New York Number—June, 1929). 299 pages with 125 illustrations. Per Clinic year, paper $12, cloth $16. Philadelphia and London: W. B. Saunders Company.

This edition is a well-compiled résumé of many interesting cases. Bone surgery is especially featured in

(Continued on page xviii.)

What happens to SUGAR in the body?



Sugar is the most prominent fuel burned in the body

When sugar is digested, it is absorbed from the intestines and carried to the liver. From the liver it is converted into glycogen, an animal starch. Later on the glycogen is passed on and stored as glycogen in the muscles. It is in the muscles that sugar is burned to keep the body warm. The muscles are the fire-box of the body.

When the body has both sugar and fat available at the same time, sugar is burned by preference. To use a military analogy, sugar is the first line of troops and fats are the second line of troops. Day in and day out, sugar is the most prominent fuel burned in the body, and on a day of added exertion, the amount of sugar in the diet should be increased.

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From the standpoint of several important contributions sugar makes to the diet, the cost of sugar is very low. It is for these reasons that the public finds the use of sugar of outstanding importance. The Sugar Institute, 129 Front Street, New York City.

BOOK REVIEWS

(Continued from page 122.)

the volume, particularly William B. Coley's report on "Sarcoma of the Long Bones." Surgery of the gastro-intestinal tract, chest, bladder and prostate, and the pancreas is also included. This book is well written, and worthy of the general surgeon's consideration.

MEDICAL STATE BOARD QUESTIONS AND ANSWERS. By R. Max Goepp, M.D., Professor of Clinical Medicine in the Graduate School of Medicine, University of Pennsylvania. Sixth Edition, thoroughly revised. Octavo volume of 754 pages. Philadelphia and London: W. B. Saunders Company, 1929. Cloth, $6 net.

This book by Dr. Goepp is very popular with applicants who are preparing for a state board examination. In this, the sixth edition, the author has attempted to delete the obsolete, and keep the contents up to date with the insertion of present-day material. Such revisions are necessary. It is of peculiar interest to note in some textbooks the subjects incorporated under the various headings. For instance, in this book, under "Diseases of Bones," on page 533, are to be found preparation of normal salt solution at home, shock, and anesthesia and anesthetics. Any one hunting especially for these subjects would do so under general surgery, rather than diseases of bones. Of course, the index would help.

This book is unique in its field, and serves a very useful purpose.

PHYSICAL EXAMINATION AND DIAGNOSTIC ANATOMY. By Charles B. Slade, M.D., formerly chief of Clinic in General Medicine, University and Bellevue Hospital Medical School, New York. Fourth edition, thoroughly revised. 12mo of 196 pages, with 43 illustrations. Philadelphia and London: W. B. Saunders Company, 1929. Cloth, $2 net.

The fourth edition of this excellent treatise will be welcomed by those who enjoyed the earlier publications. The book is written by an author who has the ability to make old truths interesting. Every page reveals the writer to be a careful observer, a thoughtful student, and a sound, enthusiastic teacher. Medical teachers can read the volume with profit, practitioners will find it useful, and if an undergraduate will read it thoughtfully he will find his work in physical examination, physical diagnosis, and clinical medicine made much easier because of its simple truths.

MINOR SURGERY. By Frederick B. Christopher, M.D., Associate in Surgery at Northwestern University Medical School, Chicago. With a Foreword by Allen B. Kanavel, M.D., Professor of Surgery, Northwestern University Medical School. Octavo of 694 pages, with 465 illustrations. Philadelphia and London: W. B. Saunders Company, 1929. Price, $8 net.

This book represents a clear-cut and concise discussion of the surgical problems generally included under that term, conditions that are apt to fall to the care of the general practitioner, as well as to the general surgeon. It should be of special value to the young surgeon who is just beginning his preparation for major surgery, and is an ideal reference book to have handy in any surgical dispensary.

It is well written, profusely illustrated with drawings and photographs, and is an extremely easy book to read and understand. Proper attention has been paid to organization, and after such general considerations as wounds, infections, and circulatory disturbances, the more specific conditions are grouped topographically. Diagnosis as well as treatment are stressed, and where more detailed information is desired, the footnotes will

(Concluded on page xx.)

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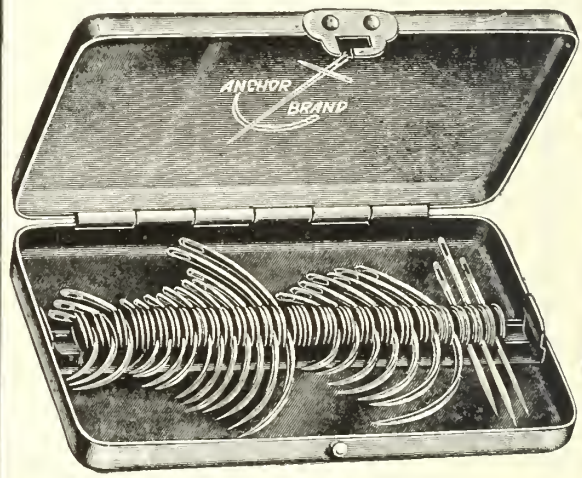

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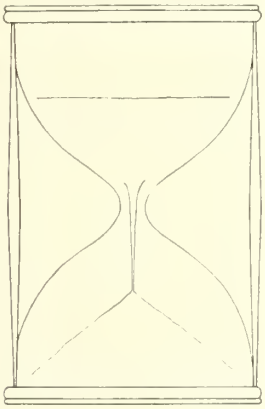
Taking Time



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BOOK REVIEWS

(Concluded from page xviii.)

furnish the necessary references. One whole chapter at the end of the book is devoted to a consideration of minor surgical technic.

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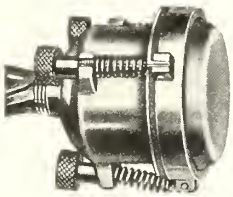

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*Therapeutic Innovations**

THERAPEUTIC EFFECTS OF PILOCARPIN IN A CASE OF SYMPATHICOTONIA†

SLOAN G. STEWART, M.D.

PHILADELPHIA, PA.

The term, sympathicotonia, first introduced by Eppinger and Hess[1] in 1910, indicates a clinical syndrome in which there is a preponderance of the symptoms and signs referable to the sympathetic system as compared to those referable to the parasympathetic system. The diagnosis of sympathicotonia, although it is made on a physiologic basis, is usually not clearly defined because of the overlapping of the sympathicotonic and vagotonic manifestations. There are cases, however, which characteristically fall into one or the other group, and their recognition is fundamentally important with respect to treatment.

In table 1 is presented a summary of the clinical picture of sympathicotonia, in contrast with vagotonia, as compiled from the data of Wolfsohn[2] and Guillaume.[3]

These signs and symptoms correspond with the physiologic actions of the sympathetic nerves. They do not represent the permanent state of the patient, for excessive sympathetic tone seems to evolve by crisis with an essentially normal state in the intervals. There is a tendency, however, to manifest these symptoms with a minimum emotional disturbance. The attacks in sympathicotonia may be extremely violent and dramatic. Cases are reported in which operations were uselessly performed during such an attack for suspected appendicitis,[4] perforated gastric ulcer,[5] and intestinal obstruction.[6]

The purpose of this paper is to present a preliminary report of three cases in which the diagnosis of sympathicotonia has been made, and to consider the unusual response to treatment by pilocarpin.

The first case is that of a woman aged thirty-five, with a history of attacks of nausea and vomiting since early childhood. Before the age of fifteen the attacks occurred every fourth or fifth week, and were not severe. After the onset of menstruation they became more frequent and severe, although the patient was perfectly well in the intervals. At the age of twenty-five the vomiting spells occurred every week or two, and were associated with dull, gnawing pains in the middle of the abdomen. There was noticeable weakness, retardation in development, and loss of weight. More recently, the attacks have occurred daily, and often two or three times a day. The abdominal pains became quite sharp, and are located in the mid-epigastrium. The attacks are aggravated by menstruation.

Vomiting has not been related to meals. At times it contained undigested food particles, but no blood. There has been no relief by the Sippy régime, soda, or any drugs.

TABLE 1

SYMPTOMS AND SIGNS IN

SYMPATHICOTONIA	VAGOTONIA
Dilated pupils.	Constricted pupils.
Dryness of eyeballs.	Epiphora.
Dryness of skin.	Hyperidrosis.
Flushing of face.	Flushing.
Frequency of goose flesh, erection of hair.	Dermographism.
Dryness of mouth.	Increased salivation.
Tachycardia.	Bradycardia.
High blood pressure.	Low blood pressure.
Low gastric acidity.	Hyperacidity.
Decreased motility of stomach and intestines in attack.	Hypermotility.
Pylorospasm, vomiting.	Pylorospasm, vomiting.
Constipation.	Diarrhea.
Precordial pain, "anginoid."	Gnawing epigastric pain.
Epigastric pain.	Biliary colic.
Nervousness, chilliness.	
Tendency to alimentary glycosuria.	Increased carbohydrate tolerance.
Extreme sensitiveness to adrenalin.	Not sensitive to adrenalin.
Atropin—vague release of over 130.	Atropin—very little increase in cardiac rate.
Pilocarpin — no salivation nor sweating.	Pilocarpin—salivation and sweating.

* Read before the Section on Medicine of the Medical Society of the State of Pennsylvania, Erie Session, October 1, 1929.

† From the Medical Division, Hospital of the University of Pennsylvania.

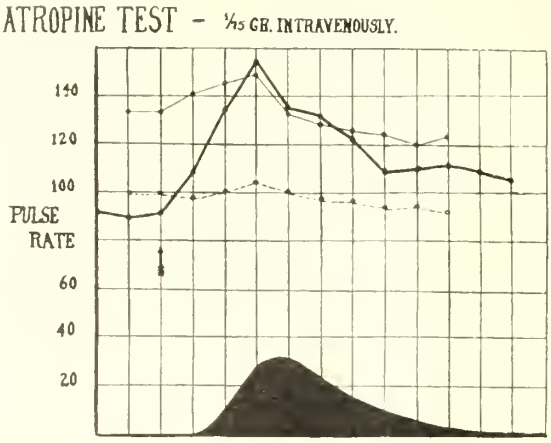

Chart 1. Abnormal increase in cardiac rate after complete vagus release (average increase from 100 to 120).

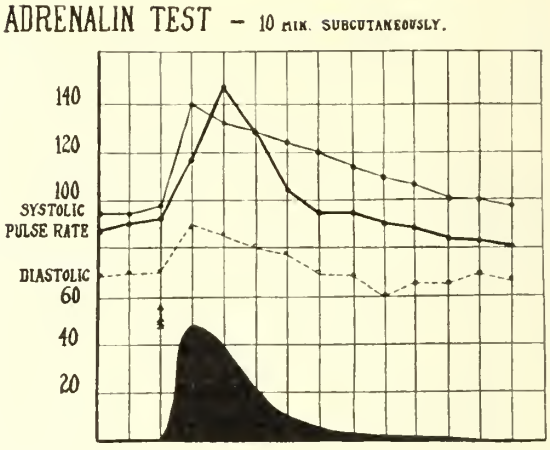

Chart 2. Extreme sensitivity to adrenalin, as illustrated by exaggerated rise in both cardiac rate and blood pressure and by aggravation of symptoms referable to the sympathetic system.

A typical attack starts with restlessness, headache, and increasing nausea. There is usually flushing, mental confusion, tremor, dilated pupils, dryness of the mouth, and goose flesh. As the attack progresses, abdominal pain and palpitation become quite severe, and eventually vomiting is precipitated. Examination during the attack reveals an elevated blood pressure, tachycardia, and almost complete absence of intestinal peristalsis. The duration is never more than three hours, and it is usually followed by great prostration, leukocytosis, glycosuria, and polyuria.

Physical examination, except for the small stature, poor development, and malnutrition, was negative. Laboratory studies revealed only the following positive findings: Slight secondary anemia, a basal metabolic rate of –21 per cent, low free gastric acidity. X-rays of the gastrointestinal tract, taken in 1921, 1926, and 1928, showed considerable six-hour residue, gastroptosis, decreased gastric motility due to pylorospasm, and stasis of the small intestine.

Charts 1 and 2 illustrate the reaction of adrenalin and atropin.

It was found that attacks could be aborted or relieved by subcutaneous injection of eserin sulphate or pilocarpin nitrate. The results of treatment with pilocarpin nitrate, one-per-cent solution, administered in daily doses by mouth, is shown in chart 3.

The second case is that of a woman, aged forty-three, who complained of vomiting, palpitation, and nervousness. As a young girl she was frail and nervous. The slightest excitement would cause her to be seized with attacks of tremulousness, blushing, and palpitation. Since the onset of menstruation, at the age of fourteen, there have been attacks of nausea and vomiting, occurring three to four times a week. Occasionally the vomiting would be absent for several months, only to recur at frequent intervals. Ac-

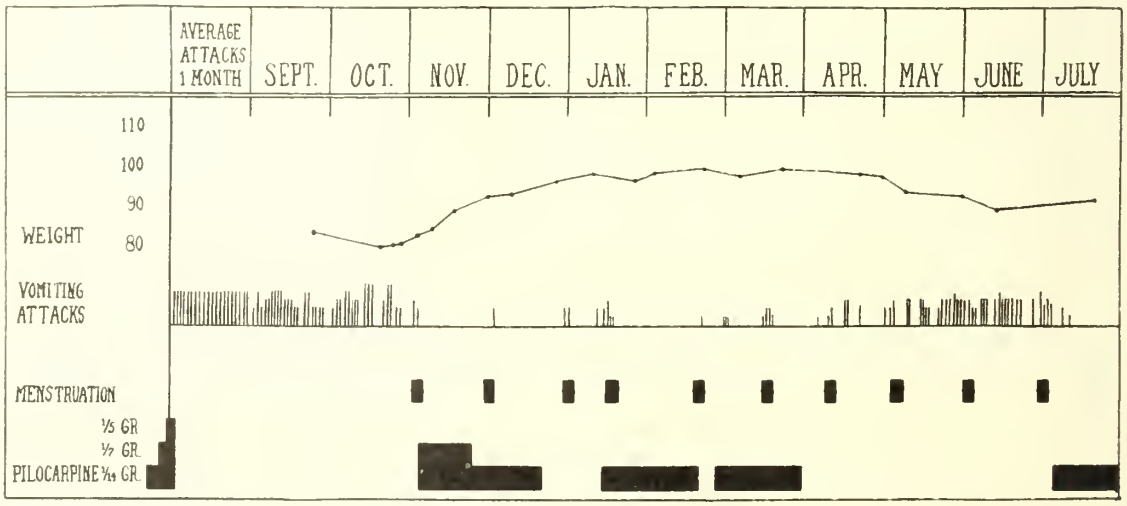

Chart 3. Response to treatment over a period of one year. Note recurrence of attacks during menstruation and in intervals during which treatment has been discontinued.

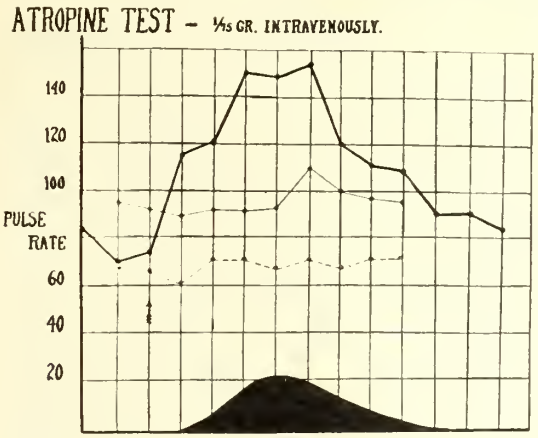

Chart 4. Marked tachycardia after complete vagus release with atropin.

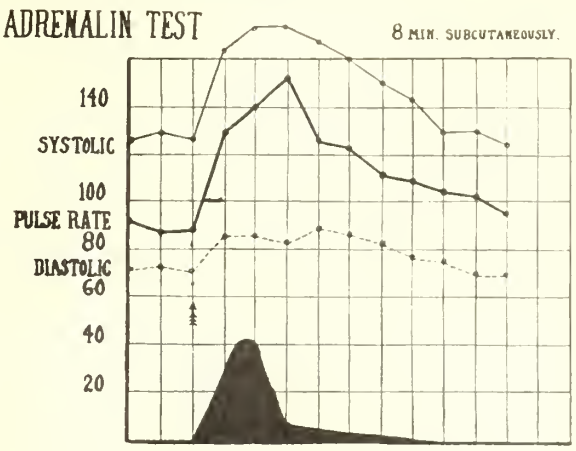

Chart 5. Hypersensitivity to adrenalin, as shown in chart 2

companying these attacks there is a feeling of nervousness, tremor, blushing, headache, palpitation, and dryness of the mouth. Obstinate constipation has been the rule.

Three years ago the vomiting attacks became more frequent and severe. Palpitation caused great uneasiness, and the nervousness and tremor were excessive. There was almost continuous dryness of the mouth. Weakness and polyuria followed the attacks. During the past year there has been precordial pain and oppression, and pains across the abdomen.

When first seen the attacks were occurring three to five times a week. They were aggravated during menstruation. There has been no relation to meals, diet, or occupation. All manner of treatments and dietary regulation have not afforded any relief.

As in the first case, the patient could anticipate an attack by a feeling of tremulousness and nausea. Tremor increased, nausea became intense, and there were intermittent abdominal pains and severe palpitation. Vomiting lasted for variable periods up to three hours. There was flushing, dilated pupils, dry mouth, and a feeling of chilliness. The systolic blood pressure often rose to 160 or 170 millimeters of mercury, and the pulse rate to 140 to 160 in severe attacks. At the height of an attack intestinal peristalsis was greatly diminished. Leukocytosis and glycosuria were found occasionally after an attack.

Physical examination was essentially negative, except for poor development and smallness of stature. Laboratory data of significance were: red blood count and hemoglobin low normal; basal metabolic rate +6 per cent; low free gastric acidity. The electrocardiograph showed slight ventricular preponderance, with simple tachycardia. X-rays of the gastro-intestinal tract, taken between attacks, showed intermittent hyperperistalsis of the stomach, with commensurate motility, and stasis of the small intestine. There was no evidence of ulcer or adhesions.

Charts 4, 5, and 6 clearly indicate the exag-

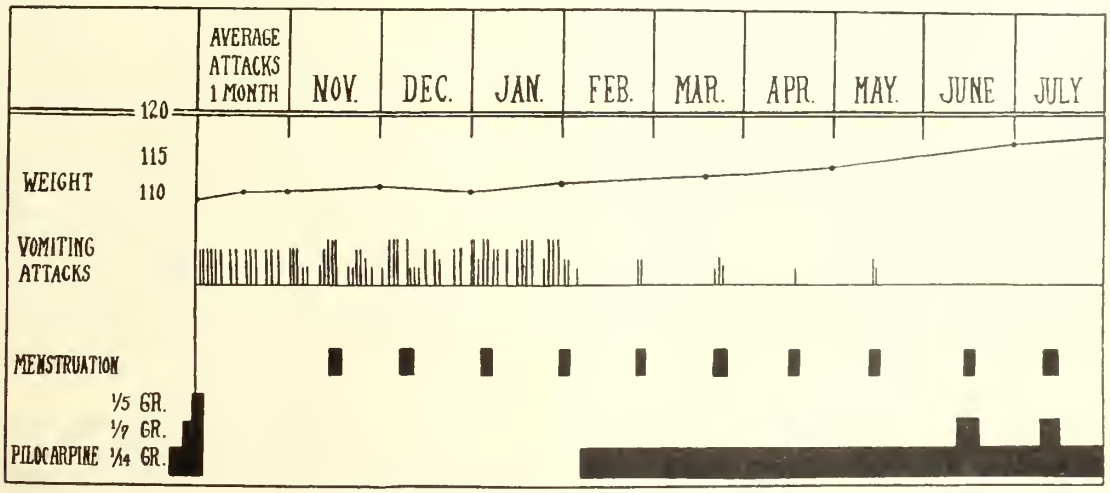

Chart 6. Response to treatment over a period of ten months. Note recurrence of attacks only during menstrual periods and freedom from attacks when dosage of pilocarpin is doubled.

gerated response in this patient to stimulation of the sympathetic nervous system.

Treatment was instituted as in case 1, and the response to treatment with pilocarpin nitrate, one-per-cent solution, is summarized in chart 6.

Discussion

Danielopolu[7] first clearly defined the criteria on which the diagnosis of sympathicotonia may be made. It is a diagnosis by exclusion, and fraught with the danger that it may simulate many acute abdominal conditions. For this reason the diagnosis may be made only with caution, after the case has been completely studied. Presumptive evidence is a lifelong history of attacks as described. This may be strengthened by the retarded structural development of the patient, the instability of the nervous and vascular systems, and the absence of any demonstrable organic lesions. Further evidence is obtained from the exaggerated response to adrenalin and atropin, as illustrated in the charts. And lastly, the diagnosis can be confirmed only by a favorable response to therapeutic doses of pilocarpin.

In the cases described, all these conditions have been fulfilled; and, if the term is adequate, they may be classified under sympathicotonia. I believe this designation is of value because it offers a rationale for treatment in a group of cases, which otherwise would pass unrecognized and inadequately treated, in that great unclassified group of gastric neuroses.

The clinical aspects of these cases will not be considered further in this paper. However, I should like merely to enumerate four points of interest for further study: (1) A familial tendency of the sympathicotonic type dominant in the female; (2) marked developmental retardation; (3) a close relationship to menstruation and pregnancy; (4) the relationship to gastrointestinal tone and motility and sphincter tone, as seen in x-ray studies.

The treatment of sympathicotonia, as judged from case reports in the literature, has been entirely symptomatic, and in only a few cases have vagotropic drugs been used. Prosorowski's[8] case was improved by intravenous administration of cholin. However, the case was not reported in detail. Laroche[9] claimed beneficial results with the use of ergotamin. Landis and Gittings[6] were the first, however, to use pilocarpin in a beautifully studied case of a child with sympathicotonia. By the continued aural administration of pilocarpin, the signs and symptoms were completely relieved.

In conclusion, I wish to emphasize again the futility of making this diagnosis without complete clinical and laboratory studies, lest some real pathology be overlooked. Secondly, I should like to point out the real danger of administering too large doses of adrenalin to these hypersensitive patients; and finally, to stress the justification for the diagnosis of sympathicotonia, namely, a favorable response to treatment.

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THE THERAPEUTIC EFFECTS OF ENCEPHALOGRAPHY*

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The term encephalography implies the roentgenologic visualization of the cerebrospinal-fluid pathways which is accomplished by the withdrawal of fluid from the spinal subarachnoid space and its substitution by air. For ten years this procedure has been in use as a diagnostic method in cerebral localization. Only recently, however, has attention been called to its therapeutic value in relieving certain late sequelæ of cerebral trauma. The sequelæ which seem to be favorably influenced by this means are headache, vertigo, tinnitus, and epilepsy.

In 1927 Penfield[1] reported seven cases of chronic post-traumatic headache which were completely relieved by lumbar air insufflation. In six of these seven cases there was an associated vertigo which was also relieved and which recurred in only one instance. These cases of Penfield's are the first reported in which air injection was performed purely from a therapeutic standpoint in cases of post-traumatic headache. In 1926, Shuster,[2] in reporting on the surface appearances of encephalograms, stated that the procedure brought relief in several cases of epilepsy.

A complete description of the operative technic and the roentgenographic findings does not come within the scope of this present communi-

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cation. However, it may be said that a uniform technic was followed in most of the cases about to be reported. The procedure was always performed with the patient in the erect posture, as shown in figure one. As the fluid was withdrawn from the lumbar sac in 5-c.c. amounts, it was replaced with air in similar amounts until no more fluid could be obtained. A constant check was kept on the intraspinal pressure by means of a water manometer, and marked fluctuations in pressure were not permitted. In a few instances the exchange was performed through a needle in the cisterna magna. Local anesthesia was always preferred except in the cases of children and apprehensive adults, in which ether was used. The immediate ill effects were headache, diaphoresis, nausea, and frequently vomiting. No permanent ill effects were observed, and there have been no disasters in a series of over one hundred encephalographies in lesions of the central nervous system.

Figure 2 illustrates what we consider to be the normal picture of an encephalogram in the anteroposterior view. In analyzing the encephalograms in a series of thirty-three cases of so-called idiopathic epilepsy and post-traumatic sequelæ, there was only one case in which the findings were considered to be entirely normal. The most common abnormality noted was a dilatation of a portion of the subarachnoid space, apparently the result of brain atrophy (figure 3). Second, there was a dilatation or distortion of a portion or all of the ventricular system (figure 4), and third, an obstruction of a portion of the subarachnoid space apparently the result of pathologic pia-arachnoid adhesions (figure 5).

For the purposes of the present study I have analyzed the therapeutic results obtained in 19 patients suffering from the sequelæ of cranial trauma and 14 patients in whom a clinical diagnosis of idiopathic epilepsy was made. Twenty-two additional cases with these diagnoses were discarded, either because subsequent surgical or medical treatment interfered with a proper evaluation of the therapeutic result, or because a follow-up report was not obtainable. The therapeutic effect on convulsions, headache, tinnitus, and vertigo has been considered. An analysis of the individual cases follows. Physical findings have been omitted from the case reports, both for the sake of brevity and because they do not pertain to the subject under consideration.

POST-TRAUMATIC CASES

CASE 1. A.B., male, aged 50, was struck in the frontal region by a fall of coal in a mine. He was knocked unconscious. Seven months later he had a similar accident, but was not unconscious at this time. He sustained an injury to the left eye. Two months after this second accident he was admitted to the University Hospital on account of impaired vision in the left eye. He also complained of frontal headaches of moderate severity. There was a mild tinnitus frequently present in the right ear.

Encephalogram: 132 c.c. of fluid were removed and 147 c.c. of air injected. The films showed extensive bilateral cortical atrophy in the frontal and parietal regions.

A follow-up report six and a half months later stated that the patient was free of headache and tinnitus.

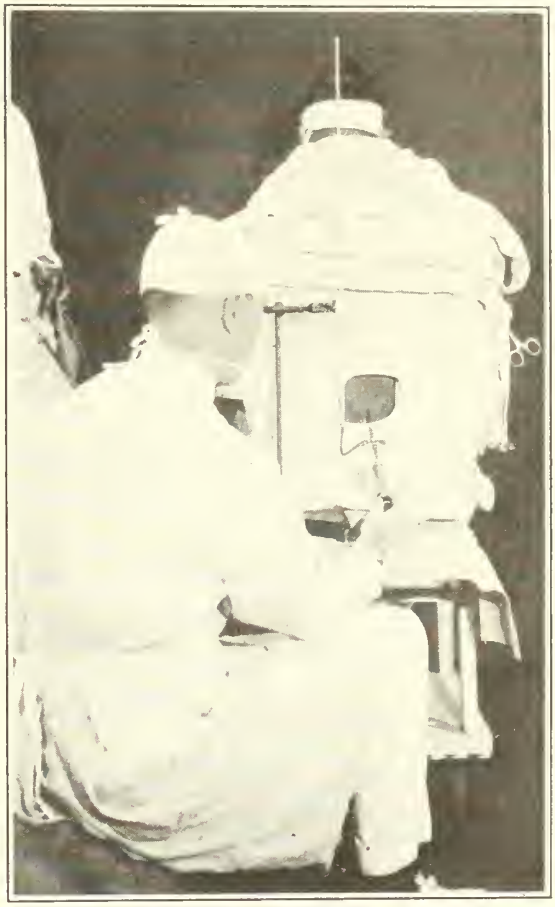

Fig. 1. Operative technic of encephalography as practiced in the Neurosurgical Department of the University of Pennsylvania Hospital.

CASE 2. J.B., male, aged 22, was kicked in the back of the head by a mule. He was rendered unconscious and was taken to a hospital, where bone fragments were removed from the fracture site. Generalized convulsive seizures began two months later and occurred about once a month. He also complained of pain in the right temporal region and dizziness.

Encephalography was performed two and a half years after the accident, when 116 c.c. of fluid were removed and 106 c.c. of air injected. The films showed slight dilatation of the lateral ventricles and cortical atrophy in the left parietal region.

A follow-up report ten months later stated that the patient had had only one convulsion since discharge. The headaches were much less severe. The vertigo was the same.

CASE 3. C.C., male, aged 21, sustained a severe trauma to the left occiput twenty-one months prior to

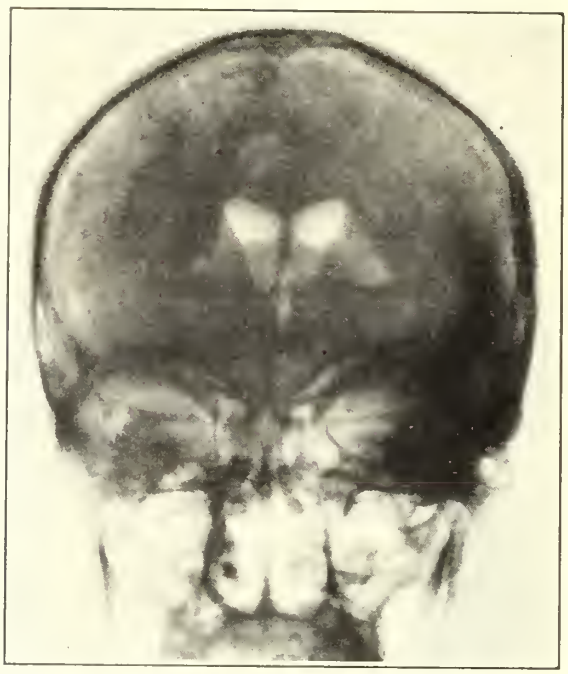

Fig. 2. Appearance of a normal encephalogram, anteroposterior view.

admission. Generalized convulsions began four months later and occurred about once a week. Headache was present in the left occipital region, and there was an associated vertigo and tinnitus.

Encephalogram: 88 c.c. of fluid were removed and 85 c.c. of air injected. The films showed an area of brain atrophy in the left parietal region.

At a follow-up examination nine months later, the patient reported that he had had six convulsions since discharge. The headache, vertigo, and tinnitus were improved. He asked for another air injection, feeling that he had been benefited. This was performed, but in the ensuing four months there was no further improvement.

CASE 4. A.C., male, aged 33, suffered a cranial trauma resulting in unconsciousness for four days. Frontal headache began at once after the accident and had been present every day. There had been frequent vertigo and tinnitus since the accident.

Encephalography was performed nine months after the accident, and 135 c.c. of fluid were removed and 142 c.c. of air injected. The films showed slight dilatation of the lateral ventricles and cortical atrophy in the left frontal region.

A follow-up report nine months later stated that the headaches were much improved, the tinnitus slightly improved, and the vertigo entirely relieved.

CASE 5. M.D., female, aged six and a half years, had a right hemiparesis, the result of a birth trauma. She had four generalized convulsions prior to admission. These occurred 21 months, 9 months, 2 months, and 1 month prior to entry.

Encephalogram: 76 c.c. of fluid were removed and 70 c.c. of air injected. The examination was unsatisfactory, due to lack of filling of the lateral ventricles, but in the ensuing sixteen months there were no convulsions.

CASE 6. H.E., female, aged 24, received a blow over the occiput three years previously. She was not unconscious. Headache and vertigo began one month later. The headache disappeared in the course of two years, but the vertigo continued. It consisted chiefly in a feeling of unsteadiness, and was relieved by lying down.

Encephalography was performed three years after the accident, when 120 c.c. of fluid were removed and 117 c.c. of air injected. The films showed cortical atrophy in the left temporoparietal region, with slight deformity of the left ventricle.

In a follow-up report ten months later, the patient stated that the vertigo was not improved.

CASE 7. L.F., male, aged 41, suffered a cranial trauma in the occipital region, eight years previously. He was unconscious for two hours and maniacal for twenty-four hours afterwards. Six years later, fainting spells began and occurred about every two weeks subsequently. During the five months prior to admission, he had five generalized convulsions, more severe on the right side.

Encephalogram: 177 c.c. of fluid were removed and 170 c.c. of air injected. The films showed marked cortical atrophy in the left parietal region.

For three months there was some improvement. In the ensuing seven months, however, the attacks were more frequent than they had been prior to encephalography.

CASE 8. M.F., male, aged 24, suffered a severe cranial trauma three and a half years previously. For sixteen months prior to study, he had generalized convulsions about once a month.

Encephalogram: 90 c.c. of fluid were removed and 76 c.c. of air injected. The films were unsatisfactory, due to lack of filling of the ventricles.

Eleven months later the patient reported that he was completely relieved for six months. Since then, the attacks had recurred about every five weeks. He requested another air injection, feeling that he had been benefited.

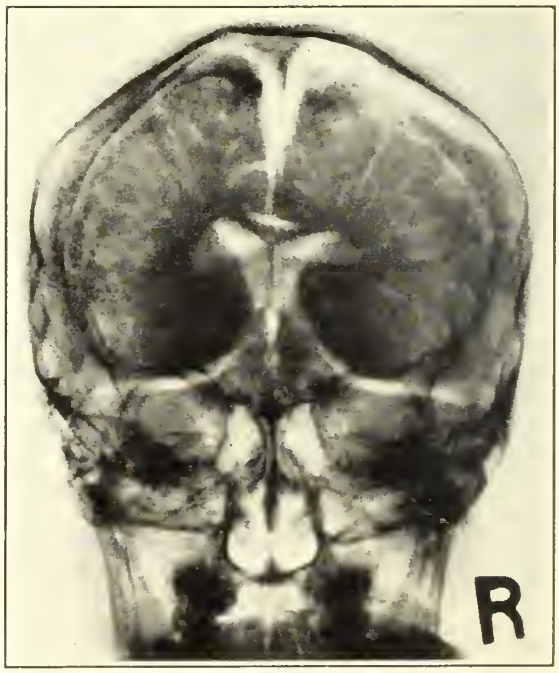

Fig. 3. Dilatation of the subarachnoid spaces, the result of brain atrophy. Cerebellar atrophy is also present in this case, as indicated by the increased amount of air beneath the tentorium.

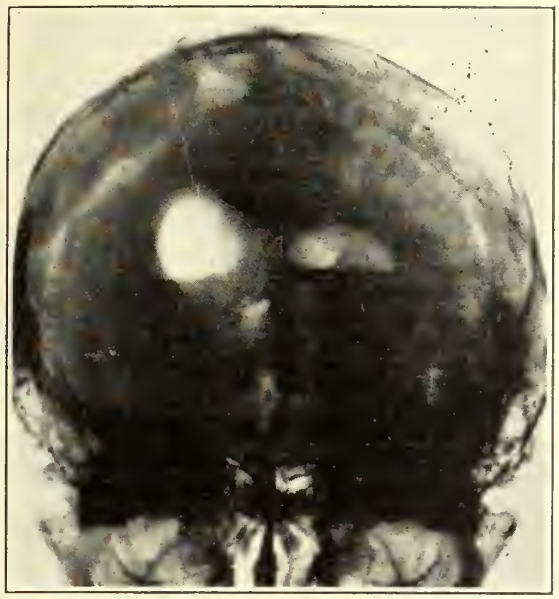

Fig. 4. Dilatation of the left lateral ventricle following a severe blow on the left side of the skull.

Case 9. L.H., male, aged 50, was struck in the right temporal region and was unconscious for about an hour. Eleven months afterwards he had a generalized convulsion, followed by another two months later. He was admitted to the hospital three months after the second convulsion.

Encephalogram: 115 c.c. of fluid were removed and 115 c.c. of air injected. The films showed a very slight dilatation of the left ventricle and less than the usual amount of air over the cortex, suggesting pia-arachnoid adhesions.

Five months later there had been no return of convulsions.

Case 10. N.H., male, aged 57, was injured in an automobile accident. He was unconscious for two and a half hours. Symptoms began almost immediately, consisting of severe frontal headache, tinnitus in the left ear, and a throbbing in the left side of the head which was synchronous with the pulse.

Encephalography was performed five months after the accident, and 132 c.c. of fluid were removed and 112 c.c. of air injected. The films showed a moderate degree of cerebral and cerebellar cortical atrophy.

The patient had complete relief for two weeks, when the symptoms suddenly returned. The air injection was repeated one week later, but little if any benefit was derived from it.

Case 11. E.K., female, aged 21, struck the back of her head nine years previously. She was not unconscious. Following this she had generalized headaches every day, gradually increasing in severity.

Encephalography was performed nine years after the accident, when 28 c.c. of fluid were removed by cisternal puncture, with the patient in the erect position, and replaced with a somewhat greater quantity of air. The films showed a diminution in size of the cortical subarachnoid spaces on the left side, perhaps due to pia-arachnoid adhesions.

Five months later the patient reported that the headaches were entirely relieved.

Case 12. J.L., male, aged 22, was struck in the left parietal region by a heavy piece of timber. He was unconscious for ten or fifteen minutes. Occipital pain developed three days later and persisted until admission.

Encephalography was performed four months after the accident. Thirty c.c. of fluid were removed by cisternal puncture and a somewhat greater amount of air was introduced. The films showed a slight degree of cerebellar cortical atrophy.

Ten months later the headaches were much less frequent and less severe.

Case 13. J.N., male, aged 40, had had a large endothelioma removed from the left motor cortex. Three months later he developed right-sided Jacksonian convulsions, increasing in frequency until they occurred two to three times daily. They were occasionally accompanied by loss of consciousness.

Encephalography was performed nine months after the operation, when 265 c.c. of fluid were removed and 236 c.c. of air injected. The films showed a dilatation of the ventricular system, with partial obliteration of the subarachnoid spaces over the left hemisphere, probably due to pia-arachnoid adhesions.

Four months later the patient reported that he was improved, the attacks occurring about twice a month.

Case 14. L.R., male, aged 30, received a blow on the left parietal region, rendering him unconscious for several days. About six months later he developed headaches which occurred about once a week. These were generalized in character but chiefly frontal. There were occasional mild attacks of vertigo.

Encephalography was performed three years after the accident, and 110 c.c. of fluid were removed by cisternal puncture and replaced with a somewhat greater amount of air. The films showed bilateral cerebral cortical atrophy, with moderate dilatation of the lateral ventricles, more marked on the left side.

Five months later the patient reported that he had had only one attack of headache, and that the vertigo was improved.

Case 15. M.S., female, aged 4½ years, suffered a severe cerebral contusion at the age of eleven months. Five months later she had a generalized convulsion. During the next three years there were eleven similar attacks, occurring at irregular intervals.

Fig. 5. Uniform dilatation of the ventricles, with absence of air in the subarachnoid spaces over one hemisphere. The latter is probably due to obstruction of the subarachnoid spaces by pia-arachnoid adhesions.

TABLE 1. THERAPEUTIC RESULTS IN NINETEEN PATIENTS WITH POST-TRAUMATIC SEQUELÆ

Sequelæ	Epilepsy	Headache	Tinnitus	Vertigo
Total cases	12	12	6	8
Average follow-up interval	9 mo.	8.6 mo.	9 mo.	9 mo.
Relieved	4	2	2	2
Improved	5	8	2	3
Unimproved	1	1	1	3
Worse	2	1	1	0

Encephalography was performed three and a half years after the trauma. Thirty-five c.c. of fluid were withdrawn by cisternal puncture, and a somewhat greater quantity of air introduced. The films showed that the right ventricle was dilated and the midline structures displaced to the right. There were bilateral pia-arachnoid adhesions, as shown by the absence of air in the subarachnoid spaces over the cerebral cortices.

There have been two convulsions in seven months. They were less severe. The child was brighter and slept soundly at night, which she did not do before encephalography.

CASE 16. M.S., male, aged 15, suffered a cerebral contusion two and a half years previously. Headache and convulsions began directly afterwards. Four or five paroxysms of headache occurred daily. Convulsions occurred about twice a month.

Encephalography was performed two and a half years after the accident, when 89 c.c. of fluid were removed and 74 c.c. of air injected. The films showed a dilatation of the left ventricle.

Ten months later the headaches were decreased in frequency to one in two months. The frequency of the convulsions was the same, but the severity was less.

CASE 17. G.V., female, aged 16, suffered a cerebral birth trauma. Generalized convulsions developed at the age of 14 years, and occurred about once a month. Right temporal headache had been present for two months prior to study.

Encephalogram: 85 c.c. of fluid were removed and 88 c.c. of air injected. The films showed a dilatation of the left ventricle and a huge porencephalic cyst communicating with the right ventricle.

Eight months later it was stated that the patient's condition was worse, but no details were furnished.

CASE 18. T.Y., male, aged 25, suffered a severe cerebral contusion three and a half years previously. Severe headaches began at once. They occurred at weekly intervals, increasing in frequency until they were practically continuous for several weeks prior to admission. During the seven months prior to admission there were eight attacks of unconsciousness, not associated, however, with actual convulsive movements. Tinnitus and vertigo were frequently present.

Encephalography was performed three and a half years after the accident, when 227 c.c. of fluid were removed and 238 c.c. of air introduced. The films showed a slight dilatation of the right ventricle, and cortical atrophy of the right cerebral hemisphere.

Six months later the patient reported that the headaches were infrequent and less severe. There were no further attacks of unconsciousness. The vertigo was entirely relieved. The tinnitus was worse.

CASE 19. J.R., male, aged 20, suffered a cerebral contusion one year prior to admission. Following this he complained of occasional headaches, tinnitus, and vertigo. Generalized convulsions developed six months after the trauma.

Encephalogram: 96 c.c. of fluid were removed and 98 c.c. of air injected. The films showed a slight degree of cerebral cortical atrophy which was bilateral.

Eight months later the patient reported that there had been no more convulsions. The tinnitus was entirely relieved. The headaches and vertigo were improved.

SUMMARY

In analyzing the therapeutic results in these nineteen patients, the following data were obtained: The average follow-up interval in the twelve cases of post-traumatic epilepsy was 9 months. Of these twelve patients, four had no further attacks over an interval averaging 9 months. Five were apparently improved, in that the attacks were less frequent. In one patient the attacks were unchanged, and in two others the attacks were more frequent after encephalography.

In twelve patients suffering from post-traumatic headache, the average follow-up period was 8.6 months. Of these twelve, two reported complete relief, eight were improved, one showed no improvement and one was worse after encephalography.

In six patients suffering from post-traumatic tinnitus, the average follow-up period was nine months. Two of these patients were entirely relieved, two were improved, one showed no change, and one was worse after encephalography.

In eight patients complaining of post-traumatic vertigo, the average follow-up interval was nine months. Two of these patients were entirely

TABLE 2. THERAPEUTIC RESULTS OF ENCEPHALOGRAPHY IN FOURTEEN PATIENTS WITH A CLINICAL DIAGNOSIS OF IDIOPATHIC EPILEPSY

Average Follow-up Interval, 9.3 Months

	Epilepsy	Headache	Tinnitus	Vertigo
Total cases	14	7	4	5
Relieved	5	2	1	1
Improved	4	3	2	2
Unimproved	3	2	1	2
Worse	2	0	0	0

relieved, three were improved, and three showed no change after encephalography.

ESSENTIAL EPILEPSY

CASE 20. L.B., male, aged 21. Generalized convulsive seizures began at the age of 16, and occurred about every two months thereafter.

Encephalogram: 105 c.c. of fluid were removed and 100 c.c. of air introduced. The films showed cerebellar cortical atrophy.

During the next sixteen months the patient had only two attacks. At his request the air injection was repeated, and during the next three months there was no recurrence of the attacks.

CASE 21. W.C., male, aged 17, had three generalized convulsions about a week prior to admission.

Encephalogram: 90 c.c. of fluid were removed and 80 c.c. of air injected. The films showed pia-arachnoid adhesions over both frontal lobes.

During the next seventeen months the patient had no further attacks.

CASE 22. A.D., male, aged 33, had eleven generalized convulsions in twenty-two months prior to admission. The longest free interval was five months.

Encephalogram: 110 c.c. of fluid were removed and replaced with 110 c.c. of air. The films showed cortical atrophy in the left fronto-parietal region.

During the next four and a half months the patient had no further attacks.

CASE 23. C.D., male, aged 20, began to have generalized convulsions at the age of 9 years. They occurred subsequently about once a month. Very frequently a dull, throbbing headache was present, located chiefly over the left vertex.

Encephalogram: 101 c.c. of fluid were removed and 132 c.c. of air introduced. The films showed slight dilatation of the left ventricle and slight cortical atrophy of the left cerebrum.

During the ensuing ten months there was one convulsive seizure. The headaches were entirely relieved.

CASE 24. M.D., male, aged 18, had two generalized convulsive seizures about one month prior to admission. Following these there was a constant headache in the right parietal region, frequent dizzy spells while walking, and occasional tinnitus.

Encephalogram: 118 c.c. of fluid were removed and 118 c.c. of air introduced. The films showed a mild degree of cortical atrophy in the frontal regions and also in the left parietal region.

During the ensuing nine months there were no further attacks. Headache occurred about twice a week, and only at night. The attacks of vertigo were much less frequent. The tinnitus was entirely relieved for three months, and then it recurred.

CASE 25. J.F., male, aged 30, began to have generalized convulsize seizures sixteen months prior to admission. He had seven attacks in all, and the longest free interval was seven months. For several days prior to admission he had severe left frontal headaches.

Encephalogram: 105 c.c. of fluid were removed and 95 c.c. of air introduced. The films showed a slight dilatation of the lateral ventricles, with cerebral and cerebellar cortical atrophy.

During the ensuing five months there were no further attaeks. The headaches were almost entirely relieved, and the patient "felt like a new man."

CASE 26. E.F., male, aged 13, had a right-sided Jacksonian convulsion, followed by a short period of aphasia, about two weeks prior to admission.

Encephalogram: 88 c.c. of fluid were removed and 115 c.c. of air introduced. The films showed pia-arachnoid adhesions over the left cerebral cortex.

There were no further attacks in the ensuing seven months.

CASE 27. E.H., male, aged 34, had four generalized convulsive seizures during a period of twenty-five months prior to admission. He also complained of headaches which occurred about every two days, frequent dizzy spells, and tinnitus in the left ear. These latter symptoms seemed to have been ameliorated by a course of mercury and iodids, although there was no history suggestive of syphilis, and the Wassermann reactions of the blood and spinal fluid were negative.

Encephalogram: 233 c.c. of fluid were removed and 216 c.c. of air introduced. The films show a marked dilatation of the ventricular system, with a large porencephalic cyst in the left frontal region and bilateral pia-arachnoid adhesions.

This patient had two convulsions of lessened severity during the first month following his discharge. There were no further attacks in the ensuing fourteen months. The headache, vertigo, and tinnitus were entirely relieved.

CASE 28. B.H., male, aged 36, began to have generalized convulsive seizures three years prior to admission. There was weakness of the right arm occasionally following the attacks, which occurred on an average of once in six weeks. In the week prior to admission he had three attacks. He was subject to occasional attacks of headache, vertigo, and tinnitus.

Encephalogram: 100 c.c. of fluid were removed and 125 c.c. of air introduced. The films showed very extensive bilateral cerebral and cerebellar cortical atrophy.

During the ensuing six months there were two convulsive seizures. The headache, vertigo, and tinnitus were improved.

CASE 29. W.K., female, aged 32, was subject to frequent severe occipital headaches for five and a half years prior to admission. For three years she had had attacks of generalized convulsions at intervals varying from a few hours to two months. There were frequent attacks of vertigo.

Encephalogram: 125 c.c. of fluid were removed and 150 c.c. of air introduced. The films showed slight cortical atrophy in the left frontal region.

The patient's condition was reported as unimproved five months later.

CASE 30. C.M., male, aged 30, received a blow on the head at the age of 14. He was unconscious for a few minutes, but had no further symptoms. Uncinate fits began at the age of 28, associated with jerking of the right upper limb and turning of the head to the right. The attaeks increased in frequency until they occurred once or twice daily. They were frequently associated with unconsciousness.

Encephalography was performed twenty months after the onset, when 105 c.c. of fluid were removed and 100 c.c. of air injected. The films showed a mild degree of cerebellar cortical atrophy.

The attaeks at first decreased in frequency to one per week, but within two months they increased until he was having several daily. The severity was about the same. The patient returned to the clinic three months later for further treatment.

CASE 31. J. M., female, aged 22, had been subject to attacks of petit mal since the age of 9 years. They occurred on the average of twice a week. They resisted all forms of treatment, including luminal, dehydration, and a ketogenic diet.

Encephalogram: 110 c.c. of fluid were removed and

104 c.c. of air introduced. The films were practically normal.

Ten months later the patient reported that the attacks were uncharged in frequency and severity.

CASE 32. C.R., male, aged 20, began to have convulsive attacks four weeks prior to admission. The seizures were always nocturnal and generalized. There had been twenty such attacks. Since the onset the patient had been subject to headache, tinnitus, and vertigo.

Encephalography was performed five weeks after the onset, when 83 c.c. of fluid were removed and 94 c.c. of air introduced. The films showed a mild degree of cerebellar cortical atrophy.

The patient was temporarily improved, but eleven months later his condition was essentially the same as it was prior to encephalography.

CASE 33. H.Y., female, aged 9, began to have generalized convulsive seizures at the age of 3 years. The attacks occurred irregularly with occasional free intervals of several months.

Encephalogram: 105 c.c. of fluid were removed and 93 c.c. of air introduced. The films showed a very marked cortical atrophy of the right cerebrum.

Six weeks later the attacks were more frequent and more severe. At this time an abdominal binder was applied in an effort to correct a rather marked visceroptosis. During the ensuing 9 months the attacks were much less frequent than they had been prior to encephalography.

SUMMARY

Fourteen patients with a clinical diagnosis of essential epilepsy were followed for an average period of 9.3 months after encephalography. In this group five patients reported no recurrence of attacks over an average period of 8.4 months. In two of these patients (cases 22 and 25), however, the follow-up period of four or five months does not exceed the longest free interval which these patients experienced prior to encephalography. In four cases the convulsive seizures were definitely less frequent than they had been prior to encephalography, the average follow-up interval being 12.5 months. Three patients noted practically no change in the frequency or severity of the attacks. Two patients stated definitely that they were worse.

In this group the associated symptoms of headache, tinnitus, and vertigo were relieved to the same extent, as were the convulsive seizures.

CONCLUSIONS

From the above data it would seem that certain cases of convulsive seizures, post-traumatic headache, tinnitus, and vertigo may be favorably influenced by the withdrawal of the cerebrospinal fluid from the subarachnoid space and its substitution by air. The exact cause of these post-traumatic sequelæ is not known, and therefore the modus operandi by which this relief is obtained is not perfectly patent. However, the most common operative finding in post-traumatic and idiopathic epileptics is a thickening of the arachnoid membrane, with local accumulation of cerebrospinal fluid beneath. Penfield[1] has suggested that the relief of post-traumatic headache by air insufflation may result from the freeing of filamentous pathologic pia-arachnoid adhesions. When the noncompressible cushion of cerebrospinal fluid in which the brain is normally suspended is substituted by a compressible, nonsupporting cushion of air, the freeing of filamentous pia-arachnoid adhesions must necessarily follow. With this accomplished, we may assume that the cerebrospinal-fluid circulation over the involved cortex will be restored to a more nearly normal condition. For the present, we must ascribe the therapeutic results in these cases to these two factors.

It would seem, therefore, that encephalography is a justifiable therapeutic measure in patients with post-traumatic convulsive seizures, headache, tinnitus, and vertigo, and also in patients with a clinical diagnosis of idiopathic epilepsy.

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THE USE OF DEXTROSE IN THE REGULATION OF THE BODY WEIGHT

With Special Reference to the Effects in Disturbances of the Circulation and Digestion*†

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In the study of overnutrition, the influence of food, restricted exercise, lowered respiratory quotient, disturbance of endocrine glands, and water metabolism have been considered (Howard[1]). However important these phenomena are regarded, the frequent failures in treatment indicate that an additional mechanism must be explained before the problem is satisfactorily understood.

DuBois[2] has stated that knowledge of the cause for maintenance of the normal weight under varying conditions and food consumption would be a distinct advance in the study of obesity. In addition, if it were possible to establish an accurate classification, a source of error would be avoided. The term "endogenous obesity" (referring to a disturbance of the endocrine glands) is especially misleading unless the time

* From the Medical Service of Dr. Thomas McCrae and the Department for Diseases of the Chest, Jefferson Hospital, Philadelphia.

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of onset, the influence of heredity, and the habits of living have been determined accurately. Obesity due to increased caloric intake and restricted exercise, designated as exogenous in origin, may be equally misleading if data on food consumed between meals have not been obtained.

In general, the treatment of overnutrition is more or less empiric. It depends to a considerable extent on a reduction of the total caloric intake, especially fat and carbohydrate, and the administration of thyroid extract. The chief causes for failure are hunger, nervousness, weakness, and the lack of endurance in following a restricted diet. The ill effects are due largely to metabolic and nervous disturbances and lowered resistance to infection, noted frequently in patients who have followed current fads and fancies. The administration of thyroid extract, unless guided by metabolic tests and frequent clinical observations, may exaggerate these phenomena and in patients above forty years of age seriously influence the circulation.

In a study of sixty obese student nurses at the Jefferson Hospital, it appears that a disturbance in the storage of carbohydrate or overfunction of the pancreas may be a factor in obesity.[3] The patients, coöperating diligently in the study, tabulated the occurrence of symptoms and the effects of various types of food. It was suggested that the mere pleasure of eating was less frequently responsible for the excessive intake of food at meal time and between meals than the periodic craving for carbohydrate to relieve hypoglycemiclike symptoms.

A further group of 360 obese patients, with or without disturbances other than overnutrition, were observed during the past two years in order to obtain data on the influence of heredity, the types of food consumed, variations in the level of the blood sugar, the frequency of metabolic phenomena, and the results obtained from the use of the so-called dextrose-moderately-low-starch diet. It was noted that a variation in the blood sugar of from 65 to 85 mg. per 100 c.c. of blood occurred in thirty-four patients at approximately the same hour on different days, and in forty-two patients there was a fluctuation between 100 and 165 mg. per 100 c.c. of blood. In patients with the level of blood sugar at the low limit of normal, a close correlation existed between the occurrence of hypoglycemiclike symptoms, the craving for sugar, and the ingestion of carbohydrate. There were nine instances of hypoglycemiclike symptoms in individuals with elevated blood sugar who experienced relief following the intake of carbohydrate. Twelve patients had a history of gall-bladder disease, and seventeen suggested a state of potential diabetes, if not actual diabetes, because glycosuria and hyperglycemia were noted before entry to the clinic, or were found in subsequent examinations. The excessive intake of carbohydrate was more common than the overindulgence in fat or protein. The influence of heredity in overnutrition was less constant apparently than the example displayed by older members of the family in the selection of food. In seven patients, the metabolic rates, according to the Benedict-Roth and Tissot methods, were below the accepted figures for normal individuals. In the remaining eighty-four patients observed, there was no striking variation from normal.

The regimen used in treatment and the results noted are as follows: The patient tabulates accurately for three days the occurrence of symptoms, the extent of exercise, and the amount and type of food consumed. On the fourth day, if there is no contraindication to treatment, a 1,200-1,400 calory diet, consisting of clear soup, a liberal helping of three- to five-per-cent vegetables, two to three pieces of bread and butter, one average portion of meat, two small potatoes, two glasses of milk, and one orange is prescribed. On the fifth day the moderately restricted diet

Hours	Meals	Symptoms	Dextrose Tablets Administered	Squares Walked
7 a. m.	Breakfast—approximately 200 calories	.....	.....	.....
9–11 a. m.	.....	Hunger, Weakness	1, 1, 2, 2, 1,	2, 4
12 m.	Lunch—approximately 600 calories	.....	.....	.....
2–4 p. m.	.....	.....	1, 2, 1, 2, 1, 1,	6, 4
6 p. m.	Supper—approximately 500 calories	.....	1, 1, 1	3

A tabulation to show the occurrence of symptoms in an obese individual and the management of the dextrose-moderately-restricted-starch regimen. In addition to the routine administration of dextrose (one lozenge every half-hour from 9 to 11 a. m., etc.), the dosage was increased at 10 and 10.30 a. m., when symptoms of hunger and weakness occurred. Between 3 and 4 p. m. the dosage of dextrose was also increased in anticipation of symptoms noted on the previous day. This patient had consumed cake, bread, and macaroni in large quantities at meal times and between meals. In the diet, these foods were omitted between meals and reduced one-third at meal times.

is continued; but, in addition, two grams of readily available carbohydrate in the form of dextrose lozenges or powder‡ are administered (approximately thirty grams daily) every half-hour from 9.30 to 11.00 a. m., 2.30 to 5.30 p. m., and 8.30 to 9.30 p. m. (breakfast 7.30 a. m., lunch 12.15 p. m., dinner 6.15 p. m.) On the sixth day the intake of bread is either reduced or discontinued (rarely), and the half-hourly dosage of dextrose is increased from two to four grams at 10.30 a. m. and 3.00 and 3.30 p. m., or at other times to relieve symptoms of fatigue, hunger, nervousness, or weakness.

Patients who fail to lose weight during the first two weeks of the regimen in most instances are treated successfully if two to four tablespoonfuls of cottage cheese, a liberal helping of gelatin, and meat are added to the daily diet. The patients are urged to walk a quarter-mile leisurely in the morning and a half-mile in the afternoon at the beginning of the regimen. The distance is increased gradually until, at the end of two weeks, two miles are covered daily. The administration of dextrose is discontinued after one month and a moderately restricted diet (1,400 to 1,800 calories), including bread and ice cream, is prescribed. If further loss of weight is desired, the regimen is resumed after a rest period of two to three weeks.

So far as determined, there have been no untoward effects other than a few instances of transient headaches at the beginning of the diet, constipation, and a sensation of fullness in the stomach if the dosage of dextrose is excessive. The majority of patients are free from mental depression and craving for carbohydrate. As the danger of a rapid loss of weight is appreciated, no patient, unless extremely obese, is permitted to lose more than four pounds weekly. In reviewing events in a group treated over two years ago, it is perhaps interesting to note twenty-two instances of a loss of fifty to one hundred pounds. In these patients the relief from symptoms without gain in weight was noted, although food had been consumed without restriction. So far as determined there have been no ill effects from eating dextrose as prescribed over a period of one year.

Although the regimen was intended primarily for the treatment of overnutrition, uncomplicated by other disorders, it has been found of value in the management of hypertension and disturbances of the circulation. In certain instances of circulatory failure with edema of the legs, it appeared that the effects of digitalis and the Karell diet were more striking if dextrose was administered as a part of the general treatment. It appeared also that the oral administration of dextrose in divided doses was equally if not more effective and certainly less disturbing to the patient than intravenous infusions. A series of patients with so-called carbohydrate indigestion characterized by tympanites, eructations, and pain in the abdomen were relieved following the reduction of the intake of starch at meal time and the administration between meals of twenty to thirty grams of dextrose daily.

Obviously the hypothesis suggesting that obesity may result from a disturbance in the sugar-regulating mechanism is largely speculative. It is unproved also that a reduction in the intake of starch and the use of small doses of dextrose favor the normal utilization of carbohydrate and thereby decrease the formation of fat and the accumulation of water and toxic products. The data are presented merely to suggest that satisfactory results may be obtained in the treatment of obesity and other conditions requiring readily available carbohydrate if symptoms and the actual fuel needs of the individual are considered.

CONCLUSIONS

(1) It appears that obesity is due largely to the excessive intake of carbohydrate. It is suggested that an overactive pancreas and a disturbance in the storage of sugar may be contributing factors in overnutrition.

(2) A regimen consisting of a reduction in the usual intake of carbohydrate at meal time and the administration of dextrose in divided doses between meals is suggested for the treatment of overnutrition.

(3) The results indicate that weight loss is accomplished because the intake of food at meal time is insufficient for maintenance of excessive fat. Dextrose administered between meals is used principally to relieve symptoms and produce energy during effort.

(4) The regimen was found useful as a part of the usual treatment for certain disturbances of digestion and the circulation.

‡ Dextrose powder was supplied through the kindness of Dr. W. R. Cathcart, of the Corn Products Refining Company, and manufactured into lozenges by Llewellyn's Drug Store, 1518 Chestnut Street, Philadelphia, Pa.

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1832 Spruce Street.

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THERAPEUTIC USE OF AN OXYGEN TENT*

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This paper is based upon the experience of treating nineteen cases of pneumonia by means of a portable oxygen tent, designed after ideas offered by Roth and Barach. Eighteen of these patients were treated in the Hospital of the University of Pennsylvania, and one was treated in the hospital of an adjoining city. It is an axiom in medicine that nothing is more difficult to evaluate accurately than the clinical effect of therapeutic agents. Furthermore, pneumonia is notoriously a unique and uncertain member in the disease family, where so often with its obscure possession, the crisis, its exact nature, and the outcome are more or less enshrouded in mystery. The number of agents used in combating this disease has been, and will probably continue to be, almost countless. The use of oxygen is by no means a new thought. What is the effect of administering increased concentrations of oxygen? Is oxygen of any value in treating the patient who has pneumonia? With the evidence now at hand, provided it is given in sufficient concentration, we feel that the answer to this last question is in the affirmative.

From September first, 1928, to September first, 1929, there were admitted to the Hospital of the University of Pennsylvania seventy-five patients with a primary diagnosis of pneumonia. Of these, only the most seriously affected were placed in the oxygen tent. These cases, together with a more detailed diagnosis and the result, are shown in the accompanying table. Before considering them in detail, however, let us recall briefly some points in the pathologic physiology of pneumonia, which would justify the use of oxygen in therapy.

From the standpoint of physiology it is difficult to think of oxygen without at the same time thinking of that complex protein, hemoglobin, which has been called "perhaps the most interesting substance in the world." Oxygen is transported by the blood, in combination with hemoglobin, in the form of oxyhemoglobin, and is dissociated from the hemoglobin as it is needed by tissue metabolism. As oxyhemoglobin loses its oxygen, the blood loses its bright red color and becomes increasingly darker. It is this reduced hemoglobin which gives the blood its peculiar appearance in pneumonia, and which accounts for the cyanosis seen at some stage in most cases of pneumonia. When there is a large amount of reduced hemoglobin in the arterial blood, we are in the habit of speaking of this condition as anoxemia.

It should always be remembered that there is a definite limit to the amount of oxygen which can be taken up by a given sample of blood. This limit is in definite proportion to the iron-containing portion of the hemoglobin molecule. That is, it is in direct proportion to hemoglobin percentage. The "percentage saturation of the hemoglobin" is of great interest in pneumonia, and is of inestimable value in judging the effect of oxygen administration. This figure is obtained by puncturing an artery, under local anesthesia, to obtain a sample of arterial blood. The amount of oxygen in this sample is determined. This figure is known as the "oxygen content." Next, the maximum amount of oxygen that this sample of blood will take up is determined. This latter figure is known as the "oxygen capacity." The ratio between the first figure and the second gives us the "percentage saturation of the hemoglobin."

In the normal individual, the arterial blood has an oxygen content of 19 volumes per cent, and a capacity of 20 volumes per cent. Its hemoglobin, therefore, is 95 per cent saturated. From the studies of Binger, Stadie, and others, it has been shown that there is, in most cases of acute pneumonia, at some stage some degree of anoxemia. Further, this degree of anoxemia may reach alarming proportions. Also, it has been shown that this anoxemia bears a relationship to the mortality. A hemoglobin percentage saturation of less than 70 per cent indicates a grave prognosis.

As has already been stated, only the most severe cases of the seventy-five were treated with oxygen. In several of these cases the outlook was virtually hopeless at the time the patient was admitted and treatment started. Many of these patients had arterial puncture studies. In addition, arterial punctures were done on a series of pneumonias that were not receiving oxygen. In this way it was possible to know more accurately whether the patient had any degree of anoxemia. In this series are included only cases in which a definite cyanosis existed.

Of these 19 cases that were so treated, 7 recovered and 12 died. Of these, 6 had positive blood cultures. In one fatal case the organism isolated was the Friedländer bacillus. This organism produces a very high mortality, as a rule, although in the past two years we have seen four patients in whom the disease has gone into a chronic stage, closely resembling, from the standpoint of clinical and roentgenologic diagnoses, chronic pulmonary tuberculosis.

What was the effect of oxygen inhalation on

* From the Medical Division of the Hospital of the University of Pennsylvania.

the symptoms and the clinical course of the disease in these patients? In practically every case, except during the last hours of life, it was possible to relieve the cyanosis. With one exception, the patients seemed to be more comfortable and to breathe more easily while receiving oxygen. As a rule, they were less restless, and two of them requested that they be placed under the tent again when the oxygen administration had been temporarily discontinued. One of these was a dental student, and with your permission I shall quote briefly his subjective impressions, which he later kindly wrote for us while he was convalescing in the hospital.

OXYGEN THERAPY AND PNEUMONIA

Case No.	Age	Diagnosis	Result
1	28	Postoperative bronchopneumonia	Recovered
2	50	Bronchopneumonia (Secondary to injuries in airplane accident)	Recovered
3	37	Lobar pneumonia (Positive blood culture — pneumococcus type II)	Died
4	37	Bronchopneumonia (Acute endocarditis)	Died
5	63	Lobar pneumonia (Positive blood culture — pneumococcus type III)	Died
6	59	Bronchopneumonia (Postoperative)	Recovered
7	40	Bronchopneumonia (Toxemia of pregnancy)	Died
8	21	Bronchopneumonia (Influenzal?)	Died
9	22	Bronchopneumonia (Empyema. Staphyloeoccus hemolyticus)	Recovered
10	55	Lobar pneumonia (Positive blood culture—Staphylococcus hemolyticus)	Died
11	21	Lobar pneumonia (Pneumococcus type I. Serum also used)	Recovered
12	51	Lobar pneumonia (Pneumococcus type IV)	Died
13	41	Lobar pneumonia (Pneumococcus type IV)	Died
14	53	Bronchopneumonia (Friedlander bacillus)	Died
15	33	Bronchopneumonia (Positive blood culture—pneumococcus type III)	Died
16	29	Lobar pneumonia (Pneumococcus type IV)	Recovered
17	35	Lobar pneumonia (Positive blood culture — pneumococcus type II)	Died
18	25	Lobar pneumonia (Pneumococcus type IV)	Recovered
19	26	Lobar pneumonia (Positive blood culture — pneumococcus type IV)	Died

He says: "However, concerning my second experience beneath the tent of the 'machine,' my mind is very clear. I had improved and the 'machine' had been removed for more than a day. Early one morning, I was taken with a severe choking spell. It is believed that a pus sac full of Dakin's solution in my lung had sloughed, or burst, allowing the Dakin's to enter one of the bronchi. It struck me as similar to being gassed during the war. At the moment when I thought I had about choked to death and was breathing in very short, extremely rapid gasps, the 'machine' was reinstalled, and I was placed under it. The relief was as marked as rapid. Each inspiration seemed to be forced to double its former volume. In reality, the rapidity of the gasps was halved, and I was forced to hold each breath that much longer. This required no effort on my part. In fact, the effort of breathing was reduced. Inspiration was involuntary, indeed was forced, it seemed, by the oxygen. There was a coolness about the air, a freshness which produced a feeling of satiety. I dozed off to sleep quite slowly, and I remember, with a feeling of complete content."

It has been our impression that systemic blood pressure is better sustained while oxygen is being inhaled. Additional observations are now being made on this point. In our experience the temperature, pulse, and respiration curves show nothing dramatic after oxygen therapy is begun. As a rule, the act of respiration appears to occur with less effort on the part of the patient. I think it is fair to state that the outstanding clinical effect of administering oxygen, by this method, is the control of cyanosis.

As to indications for the use of oxygen therapeutically, it should be borne in mind that in all parts of the body it is undesirable to have any anoxemia existing. We feel that oxygen should be begun with the first appearance of cyanosis and then continued so long as the individual case may demand.

The principle of the apparatus used is quite simple. The head and thorax of the patient are enclosed in a tentlike barrier, in the front of which there is a window. This enclosure has two portholes, one for bringing in the air con-

taining the increased partial pressure of oxygen, and the other to remove the expired air. The air is circulated by a fan driven by an electric motor. The expired carbon dioxid is removed by passing the expired air across soda lime, and the air that is to be inspired by the patient is cooled by passing it through cracked ice. The desired amount of oxygen is allowed to flow into the apparatus from commercial tanks containing 220 cubic feet. The ideal mode of administering oxygen is by means of an oxygen chamber, but because of their expense, to date these are relatively few in number in this country. In the absence of an oxygen chamber, we feel that such a portable apparatus can be quite an efficient substitute.

ABSTRACT OF DISCUSSION

GEORGE E. HOLTZAPPLE, M.D. (York, Pa.): I first made oxygen gas at the bedside and gave it to a patient with pneumonia on March 6, 1885. The patient was a young man, large for his age and very corpulent, who was breathing eighty times per minute. He was very cyanotic, and gasped: "Give me breath!" The thought of oxygen gas flashed into my mind. I hurriedly looked up my books and gathered together a few chemicals and returned to the patient. At the bedside I made oxygen gas, using black oxid manganese and chlorate of potash, and with the help of a neighbor administered it to the patient. Within twenty minutes his breathing and color improved, and he said "I feel better." Those present were astonished and it was looked upon almost as a miracle. His respiration rate was reduced to sixty, and he recovered and is still living in York. I decided that there was a place for oxygen gas in well-selected cases, and continued to administer it, but found that it did not give relief in all cases, only in those with extreme cyanosis. I am sure oxygen gas has been given by many physicians who consider it a failure because they gave it to patients who did not need it.

Some years ago I became interested in learning to whom priority belonged in this procedure. Through correspondence with the American Medical Association and the Surgeon-General's office in Washington, it was established that my article published on September 3, 1887, was the first on the subject to appear. There were no further articles until during the nineties, when many were published.

CANCER OF THE LARYNX*

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Ultimate results in the treatment of cancer of the larynx are dependent on many factors. The most important of these are early recognition of the cancer and surgical extirpation, sufficiently radical to remove the entire disease.

Although it is my intention to emphasize the importance of early diagnosis of laryngeal cancer, I wish to call attention to the remarkable advances that have been made during recent years in the surgical treatment of this condition. At the present time, the surgical mortality is not more than two or three per cent—a negligible risk when one considers the serious nature of the disease and the absolute absence of any other form of treatment worthy of a moment's consideration. Apart from this, surgical extirpation, if practiced early, gives better results in laryngeal cancer than in cancer of any other structure of the body. The reasons for this are that cancer usually occurs on a vocal cord in its anterior two-thirds, its growth is slow, the lymphatic drainage of the cords is a closed system, and there is little tendency to extensive metastasis until late in the disease.

By laryngofissure (thyrotomy) Chevalier Jackson reports cures in 79 per cent of a large series of cases of intrinsic cancer. Sir St. Clair Thomson reports 76 per cent of cures in a series of 70 cases of intrinsic cancer operated upon by laryngofissure. In incipient intrinsic cancer, John E. Mackenty had recurrence of the disease in three per cent after laryngectomy and in 35 per cent after laryngofissure. In his moderately advanced intrinsic cases, recurrences developed in 25 per cent, while in borderline cases the rate of recurrence was 36 per cent. In his cases of extrinsic cancer of the larynx, there was recurrence in almost 100 per cent. The cured cases in these series were free from recurrences five years after operation. This conforms to Dr. Bryson Delavan's dictum that cures should be considered only in the cases of patients who have had no recurrences within three years after operation.

The most important consideration, then, is early diagnosis. This is not so simple as it might appear. Too often a patient does not consult a physician until the development of interference with breathing or some other symptom which invariably denotes extensive involvement. Education of the laity, which is being extensively carried out, can do much to offset this and should be engaged in by every practitioner. If every adult with chronic hoarseness could be impressed with the necessity of having his larynx examined and assured that the majority of cases of early cancer of the larynx can be cured, there would be fewer cases of hopelessly advanced incurable cancer presenting themselves for relief which cannot be given.

Chronic hoarseness, used as a clinical entity, has probably contributed as much as any one factor in the late diagnosis of cancer. Hoarseness is a symptom which should direct the attention of the examiner to the larynx. There is a tendency to make a diagnosis of chronic laryn-

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gitis in cases of hoarseness. Considering hoarseness as a symptom of laryngeal dysfunction, Chevalier Jackson has enumerated a list of twenty-six conditions in which it may be present. Among these is chronic laryngitis, as well as cancer, tuberculosis, and syphilis. Removal of the tonsils or correction of a deformity of the nasal septum for the relief of hoarseness without first examining the larynx denotes an absolute lack of knowledge of the simplest principles underlying voice production. The following case report is illustrative:

A man, aged 59 years, suddenly became hoarse. His physician was consulted, and he made a diagnosis of chronic laryngitis and prescribed steam inhalations and some internal medication. The hoarseness did not lessen, and after five months the patient changed physicians. Some deformity of the nasal septum was found, and this was corrected. The hoarseness was not relieved. Inhalations were continued without relief. Finally the patient became aphonic, and for four nights was unable to sleep. Then a third physician was consulted. *He examined the larynx by the indirect method*, and found an extensive ulcerating lesion in the anterior portion of the larynx. The arytenoids were edematous and swollen, and the glottic chink was almost obliterated. A large firm lymph node was palpated on the right side of the neck. The patient was sent to the Chevalier Jackson Bronchoscopic Clinic, and tracheotomy was immediately performed to relieve the urgent dyspnea. Later, the diagnosis of cancer was verified by direct laryngoscopy and biopsy. The case was inoperable.

Cancer of the larynx is more common in the male sex. It is most commonly observed after the fortieth year. This, however, should not be too much depended upon in considering the individual case. Many cases of laryngeal cancer occurring in persons under forty years of age have been recorded. Mackenty reports laryngeal malignancy in a girl aged twenty years and in a man aged twenty-nine years.

Intrinsic cancer commonly involves a vocal cord, and usually its middle third. It does not often originate in the posterior portion of the larynx. Disturbances in the voice are usually the first and often the sole symptom until the growth has extended sufficiently to interfere with other functions. Pain is a late symptom and is commonly referred to the middle ear. It is a curious fact that patients often question the probability of cancer because of the absence of pain.

Diagnosis

The larynx comes in for its share in deductive and inferential diagnoses.

In chronic hoarseness there is a need, first of all, for a diagnosis. In diagnosis, one of the steps is to look at the larynx. Every laryngologist should be equipped to examine the larynges of adult patients by indirect or mirror laryngoscopy. In certain instances, an overhanging epiglottis may render this difficult. If the epiglottis cannot be drawn forward by some form of retractor, the larynx can be examined by direct laryngoscopy. Persistent hoarseness in an adult should immediately suggest cancer; the duration of the hoarseness is no criterion. A growth situated in the subglottic region may not seriously impair phonation for many months; on the other hand, cancer may develop in the larynx of one who has had a known benign lesion for many years (Jackson).

In conjunction with the examination of the larynx, necessary steps should be taken to rule out tuberculosis and syphilis, since these are often confused with malignancy. Physical examination of the chest, roentgen-ray studies, and serologic and sputum examinations will usually suffice. It must, however, be recalled that cancer may occur concomitantly with either tuberculosis, syphilis, or both.

Malignancy of the larynx presents certain characteristics which, when present, might be considered sufficient to warrant making a positive diagnosis were it not for the fact that often one or more of these may be absent. Histologic examination of a representative portion of the lesion is unquestionably the most certain method of diagnosis. This can be accomplished by removal of a portion of the growth and adjacent normal tissue with suitable tissue forceps through a Jackson anterior commissure laryngoscope. This procedure can be readily carried out under local anesthesia in every patient who can open his mouth. A report on this tissue should be available within twenty-four hours; in fact, an opinion can be secured in eight hours.

Certain objections to biopsy have been made. Among these, are the danger of dissemination of the growth and the frequent negative reports obtained in cases that are clinically cancer. If the rapid paraffin method of tissue preparation is used, operation may be performed within twenty-four hours after the specimen is removed, provided, of course, that the patient is acquainted with the fact that cancer is suspected, and that permission is secured to proceed immediately with the operation should the biopsy be positive. Certainly there is little opportunity for metastasis to occur within twenty-four hours. Unfortunately, much time is often wasted by patients who are undecided as to what course to pursue.

Regarding negative reports, the pathologist should be familiar with laryngeal tissue and should be able properly to orient the specimen submitted for examination. Obviously the laryn-

gologist must remove a representative portion of the diseased tissue, and can expect a report only on that which was submitted for study.

Treatment

The treatment of cancer of the larynx is surgical. As in cancer anywhere, the success of the operation depends on complete removal of the diseased tissue. Whether the operation is to be conservative (laryngofissure) or radical (laryngectomy) depends upon the choice of the operator in the individual case. If the cancer is inoperable it is hopeless. The use of the roentgen ray or radium have been extremely disappointing; at most, they are palliative. Certainly in no operable case should they ever be used in preference to surgical treatment.

Summary

The maxim in cancer of the larynx should be early diagnosis, early operation, excellent results. Every case of hoarseness occurring in an adult should be considered as cancer until proved negative. In this day, when there is so much time, energy, and money being spent to discover the cause of cancer, it behooves every one of us at least to detect its presence, especially where it can be so easily seen and where it can be so effectively treated.

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ABSTRACT OF DISCUSSION

Robert M. Lukens, M.D. (Philadelphia, Pa.): It seems unnecessary to harp on early examination of the larynx in all cases of hoarseness, and yet in spite of the thousands of times that speakers in medical meetings stress the point of early laryngeal examination, cases of malignant disease crop up regularly with a history of treatment for laryngitis extending over long periods of time without a single mirror examination. There are also many instances where patients are treated for simple laryngitis for a long time, having had but a single examination by a physician. In the clinic several cases of tuberculosis and cancer of the larynx have cropped up which have had but a single examination, and that apparently incomplete, followed by prolonged medical treatment.

Failure to make an early diagnosis in cases of laryngeal cancer often is due to lack of observation rather than to lack of knowledge. I recall a patient who appeared in my clinic at the Phipps Institute with a history of hoarseness for several months. Her physician experienced difficulty in examining the larynx at her first visit and did not repeat it. She finally came to the Phipps Institute and was sent to the laryngeal department for a nose and throat examination. At first I could see only the posterior two thirds of the larynx, due to a drooping epiglottis and the nervousness of the patient. The visible portion of the larynx had the appearance of a mild general inflammation. However, at her next appearance a few days later, a complete view of the cords was obtained and a small growth was found on the anterior third of the right vocal cord. A biopsy was done and a diagnosis of cancer made. She was later operated on successfully. This illustrates the necessity of securing a complete view of the larynx in all cases of hoarseness before arriving at a diagnosis.

There is no real reason why so many serious laryngeal lesions should get beyond the curable limit before they come to the attention of the laryngologist, such as in the case cited by Dr. Clerf. It is not necessary that the general practitioner be skilled in the diagnosis of laryngeal lesions, but the average physician should be able to tell, by mirror examination, whether there is any pathology in the larynx, and if there is, to send the patient to a competent laryngologist for diagnosis at least. I feel that no case of hoarseness extending over a few weeks should be treated by a general practitioner.

In every case of new growth in the larynx a biopsy should be performed. In our experience, biopsy of a suspicious area of the larynx has never caused any harm, even in tuberculosis in which there was a suspicion of malignancy. Normal healing took place rather than an extension of the tuberculosis.

I wish to emphasize what Dr. Clerf has said in his summary, that success in the treatment of laryngeal cancer will be in proportion to the promptness with which diagnosis is made.

Robert F. Ridpath, M.D. (Philadelphia, Pa.): I want to make a plea to the members of this Section, and through them to the general practitioner, for careful examination of the larynx in cases which suggest its need. It is regrettable, the number of cases treated by general practitioners and even by some so-called specialists in which the larynx is not examined. When a patient suffering with hoarseness comes to a physician, it is his duty to learn the reason for the condition. The majority of these patients are afraid to consult the specialist because they have found by experience or have been told by other people that the specialist so often will make only a casual examination and then apply silver nitrate to the larynx, failing to make a diagnosis. Let us examine the throats of the people coming to us in a thoroughly scientific manner, for there are many sad cases referred which are too far advanced to do anything for them.

In the extrinsic cancers, the mortality is one hundred per cent. It is only in the intrinsic cases diagnosed early that the mortality is small. I was glad to hear Dr. Clerf state that the majority of cancerous growths occur in the anterior commissure, contrary to earlier teaching. There are more tuberculous infections and syphilitic manifestations in the posterior commissure.

There is a malignancy of the so-called false cord in which there may be quite extensive growth, but without hoarseness until late in the disease because the condition does not prevent approximation of the cords for the simple reason that, although the cord is partially immobilized by the growth, the opposite cord compensates and comes over past the meridian line, and therefore hoarseness does not appear in these cases. In such cases extrinsic cancer may exist before symptoms are manifested.

Just as a proper examination of the nasal passages cannot be made without a cocain solution to shrink the tissues and enlarge the passages, neither can a thorough examination of the larynx be made without the use of some solution to paralyze the mucous membrane partially.

James A. Babbitt, M.D. (Philadelphia, Pa.): The greatest thing which has happened in otology is the

development of laryngoscopy. The Jackson clinic has been doing a real missionary work in giving opportunities all through the country to secure this expert diagnosis and treatment, and we owe it to them to utilize it when we find conditions that we are unable to handle with our antiquated apparatus.

I have been interested in what happens to the individual in these cases of total eradication of the larynx. Does the result justify the complete elimination of the vocal apparatus?

FREDERICK J. BISHOP, M.D. (Scranton, Pa.): Did the statistics quoted by Dr. Clerf on cancer of the larynx refer to intrinsic or extrinsic cases?

Many cases of hoarseness which do not clear up after removal of the faucial tonsils are caused by enlarged sublingual tonsils.

It is very difficult to induce the general practitioner to refer such cases for direct laryngoscopy until too late. The specialist does not see such patients early enough. Diagnosis may be made by direct laryngoscopy in cases in which nothing amiss can be discovered by other methods. The Section on Eye, Ear, Nose, and Throat Diseases should educate the general practitioner to this point of view.

DR. CLERF (in closing): Errors in diagnosis, not only with regard to the larynx but elsewhere, are more often the result of omission than commission.

I was probably somewhat vague in speaking about the tonsils. I wished to imply that we should, first of all, examine the larynx in a case of hoarseness before taking out the tonsils or correcting nasal defects. Too often that is not the case. When the tonsils have been removed, the patient becomes discouraged because he is not relieved of his hoarseness, and he seeks another physician. His larynx has not been examined.

The undergraduate school is a good place to start to teach the importance of laryngeal examinations. This should be continued in the hospital. Every intern should be able to use a laryngeal mirror before he finishes his internship. All interns learn how to take out tonsils, but they do not learn how to examine the larynx. There ought to be a resolution passed that silver nitrate should never be allowed to go below the base of the tonsil. I do not approve of using it in the larynx under any consideration. I have never seen Dr. Jackson use it and I am sure he does not approve of its use in the larynx. I do not believe it is indicated very often in the larynx, and when it is indicated, it is for some definite condition, not as a cure-all.

Answering Dr. Babbitt's question relative to laryngectomized patients, there is often definite depression when they find that they are unable to speak, but when they are brought to realize that unless a laryngectomy is done they are never going to have much voice, that it will grow less and less as time goes on, and furthermore that they will shortly have to wear a tracheotomy tube because of the dyspnea that will progressively increase, they do not feel so badly about losing the larynx and being deprived of their natural voice and being required to breathe through the neck. With the aid of an artificial larynx many cultivate a very good voice. Every now and again a patient cannot use an artificial larynx. Others develop a voice of their own.

Answering Dr. Bishop's question in regard to intrinsic or extrinsic cases, the statistics I gave of Dr. Jackson and Sir St. Clair Thomson referred to intrinsic cancer treated by the conservative method, as against Dr. Mackenty's statistics where he takes out the entire larynx in intrinsic cases irrespective of the degree of involvement.

Chronic hoarseness is a symptom, not a disease. If we would examine the larynx every time we see a patient complaining of hoarseness, I am sure we should do infinitely more for the individual patient than are many people who contribute enormous sums of money and devote a lot of time and energy to trying to find the cause of cancer. We cannot do that; it therefore behooves us to diagnose these cases early and do the best we can for them.

RECENT ADVANCES IN CHEMOTHERAPY*

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The term chemotherapy is difficult to define in a brief and concise manner. Of course, chemical agents have been used in the treatment of disease for ages, and following the discoveries of Pasteur, Koch, and others of pathogenic bacteria, germicides, and antiseptics, attempts were made to disinfect the tissues with mercurial and other compounds, the work of Lister in disinfecting the tissues locally with phenol and related substances meeting with brilliant success. In a general sense, therefore, chemotherapy is the treatment of parasitic diseases with any chemical agent, and is almost as old as the art of medicine.

But this definition is not sufficient, because it does not fulfill the principles of the modern definition of chemotherapy, as the term was coined by Ehrlich. It is one thing to *treat* an infectious disease with a chemical agent, but a different one to cure it by destroying the organisms by such means. We may treat a bacterial infection like typhoid fever with small and harmless doses of mercuric chlorid, but we do not cure the disease by such means, because we cannot give sufficient to destroy the bacilli while sparing the tissues and organs of the patient serious damage, which real chemotherapy, the chemotherapy of Ehrlich, seeks to accomplish. Chemotherapy, in a general sense, is simply the treatment of parasitic diseases with chemical agents; chemotherapy, in a modern sense, is the treatment of parasitic diseases by more or less specific disinfection of the tissues by chemical agents without marked or serious toxic effects.

Chemotherapy may be defined, therefore, as the prevention or treatment of disease by the destruction or crippling of parasites by specific chemical agents without marked or serious toxic effects. The cause may be a bacterial, protozoan, or metazoan parasite; prevention or treatment may be the result of a complete destruction of the parasites or a sufficient crippling of their proliferative mechanism (genesistasis) to permit

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the body cells and fluids to dispose of them. Under ideal conditions the medicament must not harm the body cells or produce toxic reactions at all, but since this ideal is very difficult of actual attainment in the treatment of disease, the requirements may be made less stringent and to read that these effects shall not be of a marked or serious character. The chemical agent need not be necessarily an artificial one produced by synthesis; it may be a natural medicament like quinin of cinchona bark or emetin of ipecacuanha. The science of chemotherapy, as defined by Ehrlich, "treats of the action and mechanism of the effects of chemical substances upon cells and especially of drugs upon disease-producing organisms." The subject includes, therefore, a study of both organotropic and parasitotropic actions of chemical agents and drugs.

In plain language, the science of chemotherapy constitutes a search for specifics in the treatment of all diseases caused by parasites. The parasites may be so small as to fall into the class of the filtrable viruses or as large as the beef tapeworm *(Tænia saginata)*. They may be on the skin or a mucous membrane, and vulnerable to destruction by the direct application or administration of the medicinal agent, or they may be in blood and lymph or entrenched within cells in the depths of an internal organ, and approachable only by the enteral or parenteral administration of the medicament. The one essential is that the parasites shall be killed or so crippled that the natural body defenses can complete this task, by such doses or amounts of the chemical agent as will not injure the body cells at all or but to a slight and never serious or fatal extent. When chemotherapy is looked upon in this manner, but yet in the strict modern sense of the term, it is a broad subject intimately concerned with the destruction of parasites by chemical agents and drugs ranging all the way from disinfection of the skin before operation and the destruction of hookworms in the duodenum by carbon tetrachlorid to the routing out of Spirochæta pallida in the aorta of a syphilitic by arsphenamin or one of its congeners.

The effect of a chemical compound upon parasites is called *parasitotropism,* which in general terms means its toxicity for the parasite; its effect or toxicity for body cells is called *organotropism,* and the relationship between the two is expressed as the *chemotherapeutic index.* The aim of the chemotherapeutist is to produce compounds possessing the lowest toxicity or organotropism for the body and the highest toxicity or destructive effects for the parasite. The triumph of chemotherapy and the discovery that gave it birth was the success of Ehrlich and his associates in producing salvarsan from the mother substance atoxyl by a reduction of toxicity or organotropism for the body combined with a great increase of toxicity or parasitotropism for Spirochæta pallida and trypanosomes.

The Mechanism of Chemotherapy

It is true, however, that some of the original ideas and theories of chemotherapy begin to show themselves inadequate for our expanding knowledge of the processes concerned and require reconstruction, though without either hasty or wholesale rejection of those principles which served Ehrlich and other early workers so well. But the original idea of chemotherapy, tending to shift the focus of attention from the infected host to the invading parasites by producing chemical agents capable of direct destruction of organisms without the coöperation of the body, has been questioned and especially in relation to the disinfection of the tissues in systemic infections, although this simple mechanism may, and probably does, hold good to a large degree for the disinfection of the tissues by local or topical application of parasiticidal agents.

But if the mechanism of chemical disinfection or parasitotropism involves, as it may, coöperation on the part of the host, sometimes with the production of really new chemical compounds following administration, so likewise that phase of chemotherapy touching upon organotropism

A Comparison of the Minimal Single Curative and Maximum Tolerated Doses of Various Medicaments in Syphilis of the Rabbit

Compounds	Route of Administration	Maximum Tolerated Dose Per Kilo	Minimal Curative Dose Per Kilo*	Chemotherapeutic Indices†
Arsphenamin (salvarsan)	Vein	0.120	0.012	10
Neoarsphenamin (neosalvarsan)	Vein	0.350	0.020	18
Silver arsphenamin	Vein	0.110	0.010	11
Sulpharsphenamin	Vein	0.300	0.022	16
Sulpharsphenamin	Muscle	0.350	0.024	15
Tryparsamid	Vein	0.900	0.400	2
Potassium tartrobismuthate	Muscle	0.200	0.020	10
Bismarsen	Muscle	0.400	0.020	20
Salicylate of mercury	Muscle	0.005	0.005	1
Flumerin	Vein	0.030	0.030	1
Mercuric chlorid	Vein	0.003	0.003	1
Mercurophen	Vein	0.005	0.005	1
Potassium iodid	Vein	0.310	.....	..

*Average smallest amounts required to produce not only healing of acute testicular chancres but also complete sterilization of the lymph glands.

†Obtained by dividing the minimal curative dose into the maximum tolerated dose.

or the physiologic and toxic effects of chemical compounds and drugs for the body cells has proved to be more complex than originally surmised and in large measure has become reunited with its parent subject of pharmacology, to the distinct advantage of therapeutic science.

Instead of conceiving a remedy killing invading organisms by direct union through the agency of theoretical chemoreceptors, as surmised by Ehrlich, a broader and more comprehensive conception is required to explain the observed phenomena, as a remedy not acting as such, but in virtue of the formation from it in the body of some directly toxic product, either by a modification of its structure or by its union with some tissue constituent; of modifications of virulence and a reduction of resistance with increased susceptibility to destruction by the body's natural defenses, the *mechanism of parasiticidal activity* calling into play any one or several of the following factors:

(1) The destruction or crippling of the germ by a direct chemical or physicochemical union or interaction with the drug as administered. This is likely the mechanism in local or topical treatment, but

(2) When chemical compounds are injected into the body they probably undergo modifications in structure or unite with some tissue constituents, with the formation of new compounds.

(3) These new compounds may be directly toxic for the germs or they may modify their virulence and lower their resistance to natural defenses.

(4) Or they may stimulate antibody production by releasing antigenic substances from the germs.

(5) Or they may produce hyperemia and stimulate reparative processes and oxidation; or produce leukocytosis and the mobilization of enzymes, etc.

(6) And in some instances they appear to form "depots" in the tissues (especially in intramuscular injections) from which a persistent but never dangerous concentration of curative substances is released.

And the *mechanism of organotropic or toxic effects* of chemical agents for the body cells in general or of a particular group is likewise far from being the simple matter of union by chemoreceptors, involving as it does the subjects of absorption, elimination, distribution, and other complex pharmacologic and toxicologic effects, the production of toxic lesions and symptoms being by one or more of the following processes:

(1) By immediate reactions in the blood like agglutination or lysis of erythrocytes, precipitation of plasma proteins or salts, with the production of colloidal shock reactions, embolism, etc.

(2) By direct chemical interaction between the compound or drug as administered or after some transformation in the body, with some protoplasmic constituent of the fixed body cells, resulting in the death or crippling of the latter by interference with vital processes.

(3) Or by some physical or physicochemical interaction with the protoplasmic colloids of cells, involving precipitation, coagulation, changes in electrical charge, etc., either mechanism involving the body cells as a whole or particular groups and centers by reason of special affinities or through the function of elimination.

(4) By producing excessive hyperemia, cellular infiltrations, and other tissue changes; by promoting excessive enzymic activity with the production of toxic substances from dead or devitalized body cells or parasites.

(5) By promoting or stimulating the activities of parasites, as in the Jarisch-Herxheimer reactions of syphilis, etc.

Animal Tests in Relation to Chemotherapy

But no drug for intravenous, intramuscular, or subcutaneous injection or oral administration to human beings should ever be used without thorough preliminary tests for toxicity in the lower animals. The data obtained are of great value and furthermore make it possible to determine by histopathologic studies if a compound is capable of injurious effects upon the kidneys, liver, and other important organs, even though it may not produce immediate reactions.

Furthermore it is sometimes possible to study the curative effects in experimentally produced infections and especially in syphilis, trypanosomiasis, tuberculosis, the septicemias, cancer, etc., and indeed it is now almost axiomatic that no compound should be accepted for the treatment of human syphilis that has not been first thoroughly evaluated in the treatment of rabbit syphilis.

With this brief summary of the newer developments in the mechanism of chemotherapy I may now proceed to summarize the more recent practical applications, beginning with the subject of syphilis and other spirochetic diseases, since it is in these as well as in trypanosomiasis, amebiasis, helminthiasis, and other protozoan and metazoan infestments that chemotherapy has had most of its triumphs, probably because the large size and more complicated structure and life cycles of these parasites offer more points of attack.

In the broader and more important field of the bacterial diseases, however, some advances have been made, although progress has been slow because the laws governing the chemical constitution of drugs in relation to tissue disinfection or curative activity have not as yet been worked out, and the bacteria and viruses, by their extremely small size and simpler processes, are evidently more difficult to cripple and destroy.

Chemotherapy of Syphilis

But before giving consideration to some of the newer compounds proposed for the treatment of syphilis—and a large and bewildering number have been brought forward within recent years, especially compounds of bismuth—it may be well to consider briefly the present status of some of the old stand-bys and especially arsphenamin and neoarsphenamin.

Furthermore, it may be well to pause and see how these and other compounds compare with one another in toxicity and curative activity in rabbit syphilis. As previously stated, these tests possess a great deal of practical value, especially in relation to the choice of compounds for the treatment of acute and early syphilis when prompt spirocheticidal effects are of primary importance and when the penetration of syphilitic exudates and tissues is not of particular importance, as it is, however, in the treatment of chronic syphilis. It requires years of clinical experience to evaluate a medicament in the treatment of human syphilis, whereas in truth a very good estimate of it may be had within four to six months in properly conducted tests employing rabbits with acute and chronic syphilis, including tests for complete cure by transferring their lymph glands to the testes of fresh animals for possible surviving spirochetes. (See accompanying table.)

In a broad and general sense, preference is to be given those compounds yielding the highest chemotherapeutic indices, as the aim should be to use compounds combining the lowest toxicity with the highest curative activity in the treatment of syphilis in all of its stages, although other matters require important consideration, and especially such toxic reactions as dermatitis, nitritoid reactions, etc., which do not show in animal toxicity tests, as well as intolerance, the production of pain and disability, penetrability of organs and tissues, and other important factors. Tryparsamid, for example, does not have a high chemotherapeutic index, and yet it possesses undoubted value in the treatment of syphilis of the central nervous system. Indeed, mercury has practically no chemotherapeutic index at all, because the single curative dose is practically the toxic dose, and yet no one can deny its curative properties in human syphilis.

Owing to the higher toxicity of *arsphenamin*, coupled with its greater difficulty of administration, it has been largely superseded by neoarsphenamin, but I believe that it is still the arsenical of choice in the treatment of many cases of syphilis. It is remarkably uniform in spirocheticidal activity, and is more slowly eliminated than neoarsphenamin, which renders it of particular value in the treatment of chronic syphilis. While, on the other hand, it is undoubtedly more toxic than neoarsphenamin, yet within recent years its manufacture has been greatly improved in some laboratories, with a reduction in the incidence of toxic reactions, permitting the administration of 0.4 gm. doses by a syringe method in the physician's office. Indeed there is a present-day tendency to use smaller doses than heretofore, and I personally believe that 0.4 gm. should be the maximum adult dose.

Silver arsphenamin, which has fallen off greatly in popularity within recent years, has about the same advantages and disadvantages as arsphenamin, except that it is a bit easier of administration since its solution does not require neutralization with sodium hydroxid. The danger of argyria, however, is now known not to be so important as heretofore surmised, and some physicians believe that it has a particular field of usefulness in the treatment of syphilis of the central nervous system.

Neoarsphenamin is undoubtedly the most widely used arsenical employed today in the treatment of syphilis. The greater ease of administration, greater safety, and greater freedom from untoward effects have quickly won for the compound more favor with the majority of physicians than arsphenamin and other arsenical compounds. It was particularly popular during the World War in the armies of the United States, France, and England because of the ease of its administration, and hundreds of physicians returning to civil practice have continued to use it in the treatment of syphilis. Its rapid solubility, the ease of preparing solutions, the fact that concentrated solutions may be injected, and its low toxicity constitute its greatest advantages. For the lower animals it is at least two to four times less toxic than arsphenamin in alkaline solution, and it is less likely to produce toxic reactions in human beings. These properties have encouraged the wide use of neoarsphenamin, have done more than any other single factor to foster the more thorough treatment of syphilis, and have placed the modern treatment of the disease with the organic arsenicals within the

reach of the majority of physicians instead of in the hands of a relatively few specialists.

But neoarsphenamin is only about half as spirocheticidal as arsphenamin, and it is much more likely to vary in trypanocidal and spirocheticidal activities. This is not only true of neoarsphenamin prepared in different laboratories, but to some extent with different batches prepared in the same laboratory. Today there exists a remarkable variation in the parasiticidal effects of different brands of neoarsphenamin employed in the treatment of syphilis. I have repeatedly found samples on the market unable to cure syphilis of rabbits in doses as high as 0.045 gm. per kilogram, whereas the average single curative dose should be 0.020 gm. per kilogram of weight for these animals. It is true that repeated doses may dissipate the obvious lesions of syphilis in human subjects and relieve some of the symptoms, but I doubt that the effects will be permanent, and I believe that a high incidence of tertiary syphilis will be observed in the next ten to twenty years among syphilitics who believed themselves cured by series of injections of some brands of neoarsphenamin being employed today in the treatment of acute syphilis.

Manufacturers of neoarsphenamin are laying entirely too much stress upon the flash solubility and low toxicity of their products; more attention should be given to their curative activity. In the competitive race for compounds of low toxicity, spirocheticidal activity has been overlooked, and I believe that, with some brands at least, technical procedures resulting in the lowering of toxicity for the rat have at the same time lowered toxicity for the spirochete of syphilis. I regard this situation as serious because I believe physicians and patients are not infrequently being deluded, and I hope that the Hygienic Laboratory of the Public Health Service will establish a standard of parasiticidal activity for neoarsphenamin just as it has long since done for toxicity, with wonderful and praiseworthy results. Few realize better than I do what this entails in the way of work, expense, and responsibility; indeed, tests with rabbit syphilis are out of the question on a broad scale because of the large number of animals needed and since at least four months are required to obtain final results, but trypanocidal tests are readily, rapidly, and cheaply conducted, and I am convinced that the trypanocidal activity of neoarsphenamin is a good and acceptable index of its spirocheticidal properties. I believe that manufacturers should be required to determine the trypanocidal activity of at least one out of every three to five batches of neoarsphenamin produced, and that the Hygienic Laboratory should check up the results at frequent intervals.

I hope that physicians in general will take a greater interest in this subject, and show the manufacturers that they are interested just as much in the question of curative activity as in the physical qualities of the drug and its low toxicity. Because of this variation in curative activity, I never treat a patient with the same lot number, but if 12 to 15 injections are to be given as a course, I endeavor to make up the series with at least two or three different lots of the compound. I believe this is a practical way for overcoming, in part at least, the regrettable error of treating with a single batch of the drug below the average in curative activity.

Furthermore, neoarsphenamin is likely to deteriorate in the ampules, and these changes affect not only the physical properties and toxicity but also to some extent the parasiticidal properties. For this reason it is advisable not to use neoarsphenamin more than a year old, even though it appears acceptable from the standpoint of physical properties. Pharmacists sometimes overstock and dispense to physicians neoarsphenamin several years old, and this practice is to be condemned and carefully avoided.

Neoarsphenamin, therefore, possesses the great practical advantages of ease of administration and safety. It is the remedy of choice today for the office treatment of ambulatory patients requiring arsenical therapy who cannot afford to be incapacitated by even minor reactions. The ease of administration also greatly reduces the expense—at least it should do so—and thereby enables patients of average or reduced financial status to undergo more thorough treatment than in the preneoarsphenamin days. But it must always be remembered that the drug is only about half as curative as arsphenamin at best; that if poor products are used, treatment will be insufficient, with the danger of producing arsenic fastness of surviving spirochetes, and that more injections and larger doses are thereby required; also that the compound varies in curative activity and is more likely to deteriorate, and therefore requires more vigilance on the part of the physician. It is possible to secure neoarsphenamin in which the dose of 0.9 gm. is practically equivalent in curative activity to 0.6 gm. of arsphenamin although there is a present-day tendency to use doses of 0.45 to 0.6 gm. and with such I believe that neoarsphenamin is the best and most satisfactory arsenical available today for the routine office treatment of syphilis, even though arsphenamin, sulpharsphenamin, or tryparsamid may be indicated in special cases.

Sulpharsphenamin has the distinct advantage of being administrable by subcutaneous or intramuscular injection, although in my experience the majority of adults, and especially women, are apt to complain greatly of pain and disability when the dose exceeds 0.2 gm. The immediate pain can be largely prevented by dissolving this dose in 2 c.c. of 0.5 per cent sterile solutions of butyn or novocain. It is, however, slightly less spirocheticidal than neoarsphenamin, at least one half less curative than arsphenamin by intravenous injection, and is less suitable than neoarsphenamin by this route of administration. Its chief advantages are ease of administration and especially in the treatment of children and obese adults. Furthermore, it has the advantage of slower absorption and slower elimination for the treatment of chronic syphilis, and is said to be of special value in the treatment of neurosyphilis because of greater penetrative powers.

Tryparsamid has definitely proved of value in the treatment of paresis, locomotor ataxia, and other forms of syphilis of the central nervous system, owing to its high penetrative power for these tissues, but is of but limited value in the treatment of other forms of chronic syphilis, and should not be used at all in the treatment of acute early syphilis because of its relatively low spirocheticidal activities. In the treatment of paresis in combination with mercury or bismuth it has not, however, in my experience, proved as good as malaria therapy.

Tryparsamid is of very low toxicity and is extremely well borne by intravenous injection, but it sometimes produces visual disturbances and should be stopped upon the first complaint of dimness of vision. These effects may be produced by but one or two doses of one gram each, but ordinarily do not occur until much more of the drug has been injected. It is always advisable to have the eyes examined before and at intervals during a course of injections for visual acuity, fundi, and visual fields, although a simple watchfulness for the first signs of dimness of vision is usually sufficient.

Stovarsol or acetarsone is another pentavalent arsenical known to Ehrlich but revived by Forneau, Levaditi, and other French syphilologists within recent years and especially for the preventive or abortive treatment of syphilis.

It has the advantage of being administrable by mouth in the form of a tablet containing 0.25 gm. It is very well borne, although large doses have sometimes produced diarrhea, fever, and even skin reactions, including exfoliative dermatitis.

The compound is certainly inferior to arsphenamin and neoarsphenamin, and is not a remedy of choice for the treatment of syphilis of adults except under very special circumstances. It is, however, a useful form of follow-up or "consolidation therapy" after courses of injections of the arsphenamins, bismuth, etc., and may prove of special value in the treatment of congenital syphilis of children, when given orally over a year or more of time.

It is stated that a single dose of 0.050 gm. per kilo will prevent syphilis in the rabbit and that its special usefulness is the preventive or abortive treatment of syphilis of human beings when administration is started within a day or two after exposure. The question of dosage is not yet definitely known, but it is commonly advised to give an adult four to six tablets a day for a week; after a rest period of three to four days the course is repeated, etc., over a period of at least six to eight weeks, followed by Wassermann tests and very careful clinical examinations. A sodium salt of stovarsol has been recently advocated for intravenous injection, but it is not possible at present to express an opinion of its value.

Treparsol is a compound similar to stovarsol which is also administered orally and regarded by some French syphilologists as more spirocheticidal than stovarsol. It is not possible, however, to express a definite opinion of its value at present, which is likewise true of *acetylarsan*, another pentavalent arsenical similar to stovarsol which may be given by subcutaneous, intramuscular, or intravenous injection, and is advocated as a substitute for the arsphenamins when these are not well borne.

This completes the list of arsenical compounds of present-day interest in the treatment of syphilis, although others have been advocated abroad from time to time. Sodium arsphenamin has been almost entirely superseded by neoarsphenamin, and galyl, a preparation of secret manufacture which had a brief period of popularity during the World War, has been largely abandoned, while sodium cacodylate, eparseno, and sulphoxylate arsphenamin have been proved almost worthless.

But *bismuth compounds*, introduced by Levaditi and Sazerac of France, have definitely proved their value and are here to stay in syphilotherapy. A very large number of soluble and insoluble compounds have been advocated and the list is added to every year, but it would appear that their toxicity and therapeutic activity bear a relationship to the amount of metallic bismuth in the molecule.

Bismuth is much less toxic for the lower animals and man and is at least ten to fifteen times

more spirocheticidal than mercury. Indeed the compound commonly used by me, namely, potassium tartrobismuthate in oil, has a chemotherapeutic index of about ten, thereby comparing very favorably with arsphenamin and neoarsphenamin. Both soluble and insoluble compounds are better borne than mercury, and usually produce less pain at the site of injection.

The majority are given by intramuscular injection, and while the soluble salts are absorbed more rapidly and produce less tissue reaction, yet the insoluble salts suspended in oil are likewise absorbed and their slow absorption would appear to be particularly advantageous in chronic syphilis in which it is desired to have slow absorption and slow elimination.

Bismuth compounds are of special value in the treatment of those occasional cases of acute early syphilis in which the arsphenamins cannot be safely given by reason of intolerance or other factors. They are, however, of value in the treatment of all forms of chronic symptomatic, asymptomatic, and Wassermann-fast syphilis, especially of neurosyphilis, and including congenital infections. I employ bismuth at some time in the treatment of all cases, and while these compounds have not and should not entirely replace mercury, yet they have largely done so and have proved valuable additions to syphilotherapy.

For many years chemists have sought to combine bismuth and arsphenamin in the same molecule, and this was finally accomplished by Raiziss of Philadelphia a few years ago in a compound known as bismuth arsphenamin sulphonate, to which the trade name of "*bismarsen*" has been given.

It is both water and tissue soluble, and is injected intramuscularly in a dose of 0.1 or 0.2 gm. dissolved in 2 c.c. of butyn water. Its toxicity for the rat is very low, being from 0.400 to 0.500 gm. per kilo, while its curative dose for rabbit syphilis is about 0.020 gm. per kilo, yielding a chemotherapeutic index of about 20, which is twice as high as the index of arsphenamin and the equal of neoarsphenamin.

The compound is very well borne, although some individuals, and especially women, cannot stand the pain of repeated injections of 0.2 gm. doses. The 0.1 gm. dose, however, can usually be given without difficulty. The arsenic of the compound, however, may produce dermatitis and other toxic reactions, although the incidence of constitutional reactions has been quite low.

Bismarsen, in my experience, has proved especially valuable in the treatment of chronic syphilis, since (1) it affords a means of avoiding Herxheimer reactions because of its intramuscular injection; (2) it exerts greater curative power than insoluble bismuth compounds or mercury; (3) it safely tests the tolerance of the patient for arsenic; (4) it possesses tonic or roborant properties; and (5) it represents a true form of combination chemotherapy. It has proved especially useful in the treatment of syphilis of children to whom intravenous injections cannot be given.

Finally brief mention may be made of the *combination chemotherapy of chronic syphilis* by which two or more spirocheticidal drugs are administered separately or combined at the same time. The principle consists in attacking the Spirochæta pallida simultaneously by two or more routes with drugs in smaller doses than would be required of either alone and producing more curative effects than by either separately without an increase of toxic reactions.

The injection of bismarsen represents a true example since two spirocheticidal agents are combined in the same molecule, but additional examples are the intravenous injection of 0.45 gm. of neoarsphenamin or 1 gm. of tryparsamid with the intramuscular injection of 0.1 gm. of potassium tartrobismuthate; dissolving 0.45 gm. of neoarsphenamin in 10 c.c. of mercurophen or metaphen 1 : 1000, which yield but very slightly opalescent solutions suitable for immediate intravenous injection; or dissolving the neoarsphenamin in 5 c.c. of water and adding 1 c.c. of 1 : 100 solution of mercuric chlorid, as advocated by Linser, but which yields an unsightly dark greenish solution.

Chemotherapy of Other Spirochetic Diseases

The effects of arsphenamin and its congeners have been so striking in the treatment of frambesia tropica, or yaws, a tropical infection caused by Spirochæta pertenuis, that it has completely eradicated the disease in many districts. Even single large doses have come very close indeed to being completely curative and fulfilling Ehrlich's ideal of *therapie magna sterilizans*.

These compounds have also produced similar results in recurrent or relapsing fever caused by Spirochæta recurrentis, and have proved helpful in the treatment of rat-bite fever. They and bismarsen are also sometimes strikingly curative in pulmonary spirochetosis, a form of Vincent's angina infection of the lungs, and a disease probably more prevalent than is suspected at present.

Local applications of solutions of arsphenamin and neoarsphenamin are also helpful in the treatment of "trench mouth" or spirofusillar gingi-

vitis, a form of Vincent's angina of the gums, and sodium perborate in paste or solution has proved of decided value in the local treatment of all forms of Vincent's angina. I have found that the routine use of a tooth paste incorporating one gram of mercurophen in 200 grams of paste is helpful in the treatment of all forms of gingivitis or pyorrhea alveolaris, and especially as a form of "follow-up" routine after the local treatment of the gums by the dental surgeon.

Chemotherapy of Protozoan and Metazoan Diseases

In African "sleeping sickness," or *trypanosomiasis*, the intravenous injection of "Bayer 205," or germanin, and its French analogue "moranyl" has proved very effective in the acute early stages when the trypanosomes are largely in the blood. Unfortunately, it has failed materially to influence the fatal course of the infection in the late stages when the parasites are largely in the central nervous system. Tryparsamid, however, is giving very encouraging results in the treatment of this late or "sleeping" stage, probably because of its high penetrability for the brain.

In *malaria*, quinin is still the sheet anchor in treatment, although a notable advance in its chemotherapy has been attained in plasmochin, a synthetic derivative of quinolin of secret manufacture, given in tablets in a total daily dosage of 0.05 to 0.3 gm. While this compound is slightly more effective than quinin in the treatment of the benign tertian and quartan fevers, it has been found particularly efficacious in the pernicious estivo-autumnal fever, since it would appear to be destructive for the crescents of the germ and especially in the form of "plasmochin compound," composed of 0.010 gm. plasmochin and 0.125 gm. of quinin sulphate in each pill. Since it is tasteless it is well adapted for the treatment of children.

Stovarsol by mouth has also been recommended, but it is now known to be of value only in tertian malaria, where it is scarcely better than quinin. Intravenous injections of arsphenamin and neoarsphenamin in combination with quinin by mouth continue to be recommended in chronic malaria, where it is believed that their vasodilating effects may sometimes aid in bringing the parasites from the spleen and other tissues into the blood.

In *amebic dysentery* two notable advances in chemotherapy appear to have been attained in stovarsol and iodoxyquinolin sulphonic acid, although it is very difficult to evaluate the efficacy of anti-amebic compounds except in so far as they are able to relieve acute symptoms, prevent complications and relapses, and cause the disappearance of cysts from the stools.

Ipecac and its alkaloid emetin hydrochlorid are still important compounds, although the prolonged administration of emetin is not without danger on account of cumulative toxic effects.

Stovarsol and iodoxyquinolin sulphonic acid are both given by mouth in the form of pills, the latter coated with phenyl salicylate. Both are very well borne, although stovarsol may produce gastro-intestinal disturbances and even skin eruptions. Stovarsol is given in a dose of 0.25 gm. three or four times a day for a week, followed by a rest of a week, and so on over a period of weeks or months as necessary. The dose and administration of iodoxyquinolin are similar, until as much as 42 grams have been given if required to free the stools of cysts. Arsphenamin by mouth in 0.1 gm. capsules has also been recommended, as likewise intravenous injections of neoarsphenamin in combination with stovarsol by mouth. Stovarsol is also regarded as being worthy of trial in the treatment of *balantidic dysentery*, but is of no value in bacillary dysentery. Indeed and unfortunately, chemotherapy has as yet nothing of particular value to offer in the treatment of the latter.

In *granuloma inguinale* and other forms of leishmaniasis, the intravenous injection of tartar emetic or antimony thioglycollamid continue to give good results. Stovarsol is said to be worthy of trial in the treatment of *giardiasis* and *trichomoniasis*, although the chemotherapy of these flagelloses is not very satisfactory. Neoarsphenamin and tartar emetic by intravenous injection are worthy of trial in *trichiniasis*, although the results have been mostly disappointing. Carbon tetrachlorid and tetrachlorethylene in dose of 1 to 3 c.c. by mouth have proved very successful in the treatment of *uncinariasis* or hookworm disease, and are regarded as worthy of trial in the treatment of pin- or seat-worm infestments, as well as for the removal of *Ascaris lumbricoides*. Unfortunately, chemotherapy has nothing new to offer at present for the removal of tapeworms, although this would appear to be a fertile field for research in which new compounds could be tried out in the treatment of infested dogs.

Chemotherapy of Bacterial Diseases

A host of compounds have been advocated for the *disinfection of the skin and mucous membranes* and for the local treatment of infected wounds and ulcers. An acceptable compound should (1) kill all pathogenic organisms or greatly reduce their numbers; (2) act within a period of five minutes; (3) penetrate epithelial

cells; (4) dry rapidly but not too rapidly; (5) stain sufficiently to mark off the area; (6) be free of undue irritation, especially when used on mucous membranes; (7) be of low toxicity; and (8) not be precipitated by the proteins of the blood, etc., when used intraperitoneally.

For preoperative skin disinfection: (1) 1:500 mercurophen or metaphen in 50-per-cent alcohol or acetone or mixture are probably best; (2) the official tincture of iodin next; (3) 2-per-cent mercurochrome in alcohol-acetone next, and equal to 3.5- to 7-per-cent iodin; (4) 2-per-cent mercurochrome in water has been overrated; (5) 5-per-cent methylene blue with 5-per-cent gentian violet in 50-per-cent alcohol has been recommended; and (6) 1- to 2-per-cent picric acid in 50-per-cent alcohol is quite good.

In the treatment of *infected wounds and ulcers* probably adequate surgical drainage and thorough and frequent application of any one of a variety of compounds are of primary importance, provided the solution employed is without injury to nature's remedies, the phagocytes and antibodies. The following are recommended: (a) Hexylresorcinol solution (S. T. 37) is excellent. (b) 1:500 to 1:1000 mercurophen or metaphen in water is excellent. (c) Correctly and freshly prepared Dakin's solution is excellent. (d) 2-per-cent mercurochrome is good but overrated. (e) 1:2000 acriviolet (mixture of crystal violet and acriflavin) in water is good but messy. (f) 1-per-cent solutions of ethylhydrocuprein hydrochlorid or optochin (numoquin) are sometimes helpful in local pneumococcus infections and especially corneal ulcers.

In the chemotherapy of the *septicemias,* adequate surgical drainage is of the most importance. Blood transfusions are of great value. The early administration of antistreptococcus serum is advisable in streptococcus infections. Mercurochrome intravenously (adult dose 15 to 25 c.c. of a 1-per-cent solution) is my first choice in chemotherapy, especially in staphylococcus septicemia. Mercurophen or metaphen in a dose of 10 to 20 c.c. of a 1:1000 solution are about as good, with much less danger of reaction. Pregl's iodin solution (concentrated) intravenously is worthy of trial, especially if the kidneys do not permit the use of the mercurials. Neoarsphenamin intravenously is sometimes of special value in puerperal sepsis. Gentian violet or neutral acriflavin intravenously are worthy of trial, but are mostly disappointing. Either should be freshly prepared; adult dose 20 to 40 c.c. of a ½-per-cent solution.

In *septic meningitis,* infections caused by pneumococci and streptococci are almost always fatal. Certainly, intraspinal treatment has almost invariably failed, and only early diagnosis and the prompt institution of more radical procedures offer any hope.

After research in pneumococcus meningitis of dogs, the author has found the following method worthy of trial, especially in type-I infections (for older children and adults): The injection of 25 c.c. of pneumococcus antibody solution or 10 c.c. of Felton's antipneumococcus serum with 1 c.c. of a 1-per-cent solution of optochin or ethylhydrocuprein hydrochlorid into each common carotid artery, and 5 c.c. into the cisterna magna after drainage; to be given daily for three to six treatments with two extra spinal drainages per day.

In streptococcus meningitis, one may try the injection of 20 c.c. of Pregl's iodin (concentrated) with cisternal drainage, or the injection of 25 c.c. of polyvalent antistreptococcus serum mixed with 1 c.c. of 1-per-cent acriflavin or gentian violet into each common carotid artery, along with cisternal drainage and the intracisternal injection of 5 c.c. of the mixture. This is done daily for three to six days, with two extra spinal drainages per day.

In the chemotherapy of *chronic arthritis* the following are highly recommended as an adjuvant to treatment in conjunction with removal of foci of infection, proper orthopedic care, etc.:

(a) The calcium salt of o-iodoxybenzoic acid (oxo-ate "B") by mouth. First dose two half-gram capsules; next day three capsules; thereafter three capsules a day at intervals of three to four days. The capsules should be taken with a glass of water a half-hour apart and preferably after a meal.

(b) The intravenous injection of 0.5 to 1 gm. of ammonium ortho-iodoxybenzoate (oxo-ate, S. K. F.) in selected patients only, because reactions are usually produced.

(c) May be also given by rectal injection (not satisfactory in the author's experience).

(d) Salihexin, 10 c.c. of a 10-per-cent solution intravenously every day or every other day. This is very well borne. It is sometimes useful, especially for the relief of pain and muscle spasm. It is also useful for relief in lumbago.

In various other bacterial infections the following chemotherapeutic compounds may be mentioned:

Neoarsphenamin intravenously in *anthrax septicemia.*

Sodium and gold thiosulphate intravenously (0.1 gm.) has proved almost a specific in *lupus erythematosis* (Schamberg).

Stannoxyl, 5 grains in tablet three or four times a day, is sometimes very helpful in *furunculosis* and other staphylococcus infections.

Optochin base, 0.5 gm. by mouth with 6 ounces of milk, three times a day, is probably helpful in *lobar pneumonia* in preventing or combating the highly dangerous bacteremia. It has no pronounced effect upon the lung lesions. Doses not exceeding a total of 1.5 gms. per day for four to seven days do not ordinarily produce amblyopia (dimness of vision). It is advised not to use the hydrochlorid salt (called ethylhydrocuprein or numoquin).

The intravenous injection of acriflavin is said to be helpful in some cases of *undulant fever* (caused by Brucella melitensis, which includes the organisms formerly described as Micrococcus melitensis and B. abortus, Bang). Mercurochrome intravenously is also worthy of trial.

The intravenous injection of acriflavin is stated to be worthy of trial in *encephalitis lethargica;* four to eight injections of 10 to 30 c.c. of a half-of-one-per-cent solution until lethargy clears or mania subsides.

In conclusion, it may be stated that in the chemotherapy of *cancer,* colloidal lead and other lead compounds by intravenous injection are still in the experimental stage in the treatment of this disease. Because of the danger of producing severe anemia and other toxic reactions, they should be used only in selected cases of inoperable cancer in association with x-ray or radium, and after the surgical removal of accessible tumors. In a few persons the disease has been arrested, but in the majority lead treatment has failed.

ABSTRACT OF DISCUSSION

ALEXANDER H. COLWELL, M.D. (Pittsburgh, Pa.): The progress of chemotherapy implies the closest coöperation between the practitioners of laboratory medicine and the practitioners of clinical medicine. No laboratory experiment which produces or amplifies the application of a specific remedy for disease can be regarded as complete until the remedy has been tested by clinicians in the treatment of the sick, and its values, limitations, and dangers have been estimated.

It is a wonderful thing to observe the work of the scientist who can chart the actual curative doses of salvarsan for rabbit syphilis. The work of the clinician unfortunately cannot be reduced to such exact terms. Many obstacles stand in his way, to thwart his efforts or to obscure his results. For example: A young woman, ill, consults a physician and is discovered to have active syphilis. It is necessary that some explanation be given to her as to why she needs prolonged treatment. This explanation results in such a psychic reaction that she determines to commit suicide. After long persuasion she is prevented from taking this course of action, but adequate treatment of her case is made impossible because she fears to see the physician again who knows a secret which seems terrible to her. The ravages of her disease go on unchecked. But with all its handicaps, hesitancies, and abortive efforts, clinical medicine contributes a necessary part to the application and advance of chemotherapy.

I believe that clinical experience in the treatment of bacteremias with blood transfusions and certain chemical substances is at variance with that of the research worker using laboratory animals. It is my own opinion, formed largely from knowledge of the opinions of my colleagues, that these measures are of little or no value.

In conclusion, may I repeat that the progress of chemotherapy depends upon close coöperation between laboratory and clinical practitioners. I trust that this coöperation may always continue and grow more and more intimate. As for myself, I willingly follow the lead of my friends of the laboratory and here record that from them I receive always a splendid stimulus to hopeful effort for my patients.

GEORGE W. RAIZISS, Ph.D. (Dermatological Research Laboratories, Philadelphia, Pa.): It is very gratifying to observe that in the past fifteen years American research workers have contributed largely to chemotherapy, and today we may proudly say that the research done in this country in the line of chemotherapy is parallel to that of scientists abroad.

The progress of chemotherapy is closely associated with the observations on the specific influence of various chemical groups constituting the molecule upon the destruction of bacteria and upon the cure of certain diseases. Take arsenic, which, according to the periodic system, is in the fifth group of elements, and in the same group there is bismuth. This observation probably led Levaditi and others to the discovery of the value of bismuth in the treatment of syphilis, because arsenic is known for its curative effect in this disease. On the other hand, take tryparsamid, which has a low toxicity. A group of American observers found that by the introduction of the amino group into the glycine arsonic acid, the toxicity is lowered almost ten times. The above observation led to the synthesis of tryparsamid. It is very characteristic also that most of the remarkable remedies in the treatment of syphilis known for their destructive effect on spirochetes belong to the series of trivalent organic compounds of arsenic.

Generally, by a close study of the effect of various chemical groups on pathogenic microörganisms, we can arrive at the discovery of new and valuable medicinal compounds.

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*Neuroses**

THE FOUNDATIONS FOR THE FUNCTIONAL NEUROSES†

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There is probably nothing more obscure in clinical medicine than the so-called functional group of nervous and mental diseases. If we take the simplest of these, neurasthenia, it will be sufficient for much thought and careful study. It has long been considered a distinct entity. From a fuller understanding of toxic and bac-

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†From the Philadelphia Institute for the Study and Prevention of Nervous and Mental Diseases.

terial disease processes, a very high percentage of what in the past has been considered as belonging to this disease falls into various separated groups that can be studied with some degree of logical understanding.

Notwithstanding this, there still remains a functional entity that we will call neurasthenia or nerve exhaustion, which must remain as a separate clinical picture. This, which for the present may be called essential neurasthenia, occurs in individuals, both male and female, who from birth react badly to the stress and strain of normal life. The normal nervous system and brain in early infancy react to sudden noise in a myoclonic manner. This may be so highly developed that a sudden high-pitched noise may produce convulsive manifestations. The normal infantile brain rapidly becomes accustomed to this, and as the infant grows into childhood there is no remaining reaction of this normal hypersensitivity to sound in the newborn. In the neurasthenic type this reaction remains almost as a dormant factor throughout life. In this sense of the term it bears a certain relation, in a lower key, to the essential-epileptic brain.

The reaction to sound, while an accentuation of a physiologic phenomenon, is only one of multiple reactions of the neurasthenic to an intensification of environment. The central nervous system reacts in a similar way to the other sensory impressions. In the field of the commonest summation of all these processes, the emotional and focal sensory spheres, the reactions are quite as abnormal in the neurasthenic, and we have presented to us the individual who not only fatigues easily under practically all the stresses of modern life, but presents an abnormal emotional reaction to primary psychic, and especially to situations in the psychosexual spheres.

This led Freud and others to consider these cases as a result of pure sexual traumata. While there is a type of case that is so caused, it falls into the sexual group, and must be differentiated from the essential neurasthenic, with his essentially low nerve reserve, who from birth reacts abnormally to his environment.

And this is one of the main difficulties in a consideration of this subject. The gastro-intestinal specialist is apt to look on all cases of nerve exhaustion as due to disordered functions, as a cause or result of nerve exhaustion. The eye specialist will refer all such cases to eyestrain, the tuberculosis specialist to latent tuberculosis. The psychoanalyst will ascribe all such cases to a sexual basis. All of these points of view are right for particular groups, but none of them is right for the whole group. We may ask ourselves:

(1) Is there such a condition as nerve exhaustion pure and simple, with a normal nervous system?

(2) Is there, apart from this, a mental-physical state, that is, neurasthenia, which is not simply the reaction of the nervous system to toxins or visceral disease?

(3) In the essential neurasthenic is there any explanation for this hypersensitiveness and inefficient state of the nervous system?

(4) Is there any evidence of functional derangement, such as is found in other viscera, apart from the purely mental, i. e., psychologic phenomena?

The Clinical Picture of Nerve Exhaustion in the Normal Individual

Here we must differentiate pure nerve exhaustion from neurasthenia. William James and, since his statement, Edison and others have maintained that we can get along on two or three or four hours of sleep at night, and work for twenty or twenty-two hours without any effect on the health of the individual. It would be difficult to find any neurologist who would agree with such a point of view. Certainly, just as soon as any exceptional stress or strain or intensive worry is thrown on such a nervous system, it will show a pathologic reaction, and this reaction is a clinical picture quite typical in the essential characteristics.

In every normal individual there is a layer of nerve reserve maintained for emergency purposes. Nature intended that this reserve be kept for emergencies and not for everyday use. To the primitive man this emergency might occur at any moment. The necessity for tremendous and violent effort, sustained if need be for a long time, might develop at any minute, and the individual had to be prepared with a well-stocked nerve reserve.

In modern life, the man who, instead of taking eight hours of sleep, uses up this reserve with only two or three hours of sleep, and at the same time is occupied with work that may in itself be a tax on the normal nerve reserve, sooner or later finds that these reserves become exhausted, and willy-nilly he falls into bed with violent nerve reactions. I say "falls into bed" advisedly, because these patients push on until every shred of nerve reserve is gone, and nature puts them out of commission almost in a violent way.

The symptomatology of this group is fairly uniform. It consists of: (1) A sensation of cardiac insufficiency that leads to an idée fixe of incurable heart disease. (2) Vertigo. (3) Panic states. (4) Fear of impending dissolution. (5) Gastro-intestinal symptoms—either simple indigestion with gas distention of stomach and colon, or mucous colitis.

The sensation of tremendous fatigue after exertion of the neurasthenic is missing. The

whole picture is one of loss of confidence in the heart and brain.

I have a patient at the present time who has no trace of visceral disease or underlying toxemia, and yet is unable to walk two blocks in the city. He gets into a frightful panic, such as we see in the intense phobias, with cardiac palpitation, leaky skin, pallor, and all the evidence of shock—all the result of this lack of confidence in his bodily functions. And yet, if his physician walks with him he can cover two or three miles without difficulty.

The cardiac symptomatology is various: cardiac palpitation with tachycardia, violent arhythmia, with a normal electrocardiogram, however. The arhythmia, initiated by gastro-intestinal disturbances, can at times be eliminated temporarily by suggestion and an assurance that the heart is normal. But this has to be repeated at least two or three times a week until convalescence is definitely established.

This is the picture of straight nerve exhaustion, and has nothing to do with the neurasthenic state. When the patient recovers, he recovers to a normal nervous system, free from hyperirritability or fatigability.

The Essential Neurasthenic State

That there is a type of individual mentioned above, born with a low nerve reserve and with hypersensitive reactions to sensory stimuli, there can be little question. We can produce this condition experimentally by inbreeding in horses and dogs.

The reaction of such a nervous system to focal infections and other toxins or drugs is as hypersensitive as it is to sensory and other physical impressions. For that reason we have, as will be seen later, a series of mixed types.

In the human being we may lay it down as a general rule that the essential neurasthenic is a thin, scrawny, undernourished individual. In the lower animals this type of nervous system reacts to overstimuli and overload by convulsive disorders.

The value of overnutrition in neurasthenia was first pointed out by Wier Mitchell. The rest treatment of Dr. Mitchell was built around this fat principle—fat and blood, he called it. Both in the essential, and less often in the symtomatic neurasthenias, the symptoms disappeared with an excess of weight. While the degree of fat deposition necessary to restore the reserve of the nervous system varied, it always meant a considerable excess—fifteen to thirty pounds in weight.

While this was not always true, the underweight neurasthenic was the rule. In a fat neurasthenic or psychotic, a much more complicated problem obtained. The clinical therapeutic problem was to put fat on the underweight group, and to take it off the overweight group, and get the same result. This was done empirically because Mitchell found that it gave, as a rule, good results.

There was always a group of cases that resisted overfeeding and refused to put on weight as a result of it. Dr. Robert L. Pitfield, of Philadelphia, found in marasmic children that he could fix the carbohydrates by the use of insulin.

As a result of his remarkable and valuable observations, this principle has been applied to other conditions. In our own practice we have used it with success, not only in the neuroses, but also in the psychoses, and in pulmonary tuberculosis. This experiment with insulin brings some very interesting speculations, not only as to the effect of fat deposition on prognosis in the neuroses and psychoses, but also as to the effect of insulin on the nutrition and function of the cells.

So far as the fat tissues themselves are concerned, we are dealing with a water retention of sixty per cent. The fat analysis shows a sixty-per-cent water content. Whenever, therefore, we increase the body weight by a fat deposition, and more especially by insulin, we are creating, in one sense of the term, a relatively large water content of the new body tissues which is due to increased carbohydrate fixation. How far such a change of proportion of the carbohydrates to water content could be responsible for that hypersensitivity and overfatigability of the nervous system which we call neurasthenia remains for future observation.

The influence of the pituitary and thyroid secretions on the normal and pathologic fat increase is, of course, well known. The relation of these to the pancreatic function on the one hand, and independent of the pancreatic function, to the reaction to insulin, also remains for further study.

It is within the range of probability that we may be able sometime to find some rational explanation for the essential neurasthenic state, and to develop some method of controlling it.

Apart from such theoretical considerations, it is quite evident that insulin, used therapeutically in small doses in neurasthenic and psychotic states, has a favorable effect that cannot be explained purely by the carbohydrate metabolism. The drug, in a dosage of five units hypodermically once or twice a day, has a distinctly tonic mental effect, counteracts fatigue symptoms, and produces a distinctly euphoric effect.

In order properly to understand this problem, I think much can eventually be learned from a more detailed study of the neurasthenia that has for its basis a latent or slightly active pulmonary tuberculosis. This is probably the most common cause of neurasthenia, and at one time it was considered to be essential. While it may be to a certain extent a toxemic condition, the results from treatment by insulin would indicate that we are here dealing with a much more complex problem.

While tuberculosis is, in one sense of the term, a starvation problem, in another sense it is much more than this. A tremendous demand for fat by the multiplying swarms of tubercle bacilli leads in advancing cases to a resorption of fat, not only in the body fat tissues but also in the cerebral tissues which normally have a high fat content. The cortex has eight per cent of fat and the subcortical white tissues twenty per cent of fat content.

To this is added another problem; i. e., the disturbance of the cerebral circulation as a result of the atrophy of the brain that goes on in these cases, as shown in the Phipps Institute reports. This atrophy is limited to the frontoparietal areas. In addition to this, there is a distention of the ventricles. The normal circulation of the cerebrospinal fluid is impeded, and we may assume that the function of the cell is certainly not helped by such a water-logging process.

We may assume, therefore: (1) A change in the protoplasm of the cortical cells by resorption of the fat content. (2) A further disturbance by interference with the cerebrospinal-fluid circulation. (3) A disturbance of the capillary circulation to the cells in the atrophic edemic area.

My associate, Dr. Temple Fay, has shown the importance of this subject in relation to the convulsive disorders. It has an even more important relationship in this group of cases under discussion. It is interesting to note here that the area of cortical atrophy corresponds to that seen in dementia paralytica, where the symptomatology is largely mental.

Looking at the subject purely from the starvation angle, it is interesting to study the results of starvation in reference to the carbohydrate metabolism.

Notes on Water Metabolism and Balance*

Placing patients on the ketogenic diet, low in carbohydrate and high in fat and protein, has failed to increase weight, although the amount of fat given per day was sufficient to produce signs of ketosis, with the presence of fatty acids in the urine. Popular belief today is that fats in the diet produce weight. Without the presence of carbohydrates, this is not possible by the addition of fat to the diet alone.

Patients on a low carbohydrate intake lose weight very rapidly. This is a loss of body weight due to general body water, according to the work of J. L. Gamble, G. S. Ross, and F. F. Tisdall ("The Metabolism of Fixed Base During Fasting." *J. Biol. Chem.*, 57: 633-695, Oct., 1923). They have demonstrated that there is a great reduction of general body water because of the low level of carbohydrate metabolism, although they show that there is actual reduction of intracellular water, as well as extracellular water, computed on the determination of fixed bases appearing in the urine, especially potassium, which, according to their determinations, is found in greater amounts in intracellular water, and the actual intracellular loss can be closely computed. The intracellular water-loss figures obtained in one case on a fifteen-day fast is as follows:

Intracellular water loss	
Due to destruction of protoplasm	1,620 c.c.
Due to reduction of cell volume	470 c.c.
	2,090 c.c.
Extracellular water loss	320 c.c.
Total loss of body water	2,410 c.c.
Loss of body weight	3,920 gm.
Body-weight loss due to water	62 per cent

The diabetic is unable to burn sugar and loses weight rapidly. A large proportion of the weight lost is water weight, glucose not being utilizable. He goes on a protein metabolism of his own tissues, becomes dehydrated, and then general emaciation develops with acidosis and ketosis. This is the effect of a low carbohydrate metabolism.

The combustion of glucose requires two thirds more water than that required by proteins (Gamble, Ross, and Tisdall). Hence, on a full carbohydrate diet, intracellular and extracellular water is increased. This was shown by the fact that with the balance of intake and output during a fasting period, the ingestion of carbohydrates was followed by anuria. The output of fluid which had formerly been constant was immediately suppressed and retained in the tissues for the use of carbohydrate metabolism. There is probably some osmotic factor concerned in the presence of glucose which helps to retain fluid in the tissues.

Rapid gain and loss of weight, without disturbance of the normal fatty deposits, is probably water weight, and one of the factors behind its shift is found in the water metabolism and retention secondary to carbohydrate ingestion. Rapid loss of weight may be obtained by a carbohydrate-free diet. Rapid loss of weight may be accomplished by dehydration and limitation of fluids, provided the carbohydrate diet is low enough, so that intracellular water retention is influenced. Conversely, rapid addition of weight and increase of tissue fluids can be promoted by increasing the carbohydrate metabolism; i. e., by a full carbohydrate diet and insulin.

It is evident that we are dealing with factors rotating around fundamental principles of metabolism, especially of carbohydrates, which are directly affected by insulin and the function of the pancreas. It is known that adrenalin extracts depress or disturb carbohydrate metabolism, and this may be due to disturbance in the insulin ratio not as yet proved.

The effect of pituitary and thyroid extracts on metabolic activities in relation to adrenalin and pancreas

* By Temple Fay, M.D., Philadelphia, Pa.

must receive further consideration in the light of carbohydrate metabolism. Even the gonadal function as it may affect in series, and pituitary, thyroid, and hence indirectly other endocrine glands must be considered in the future study relating to water metabolism, not only the intake and output of fluids, but a study of their avenues of escape (breath, skin, bowels, and kidneys). Electrolitic substances affect osmotic pressure and the underlying glandular influence on carbohydrate metabolism. One cannot evade the need for considering the avenues of absorption of fluid, such as the stomach and large intestine, and the circulatory factors regulating the vascular bed for absorption in the function of the return of this absorbed fluid through the portals of circulation. The effect of liver tissue upon this phase of the cycle, the blood pressure, especially the diastolic tension, plays some mechanical part in the program.

The work of E. M. Landis ("Micro-injection Studies of Capillary Permeability." No. 3, "The Effect of Lack of Oxygen on the Permeability of the Capillary Wall to Fluid and to the Plasma Proteins." *Am. J. Physiol.*, 83: 528-543, Jan., 1928) clearly indicates that deficient oxygenation of the capillary structures and cells results in increased permeability to fluid, so that fluid passes through the capillary walls at approximately four times the normal rate.

It is evident that carbohydrate metabolism and its fluid requirements, and a host of factors regarding the question of fluid, must be considered.

It appears to me that the contribution of Dr. Pitfield, mentioned above, in reference to the use of insulin in undernutrition followed to its logical conclusion along the pathways of investigation outlined by Fay, Gamble, Ross, Tisdale, Landis, and others, may throw much light, not only on the functional nervous disorders and the convulsive states, but also on that most important and pressing problem, i. e., the insanities.

The Cardiac Neurasthenias

We have already called attention to the cardiac-asthenic group in the straight exhaustion group. In the toxic neurasthenias the retrospection may begin with and eventually be fixed on the cardiac mechanism. While this may be the result of a toxic tachycardia, or the cardiac arhythmic reaction to a distended stomach or colon, or may be induced by autosuggestion as the result of cardiac deaths in the near family, there is a group of cases which lead me to the conclusion that the cardiac group of symptoms has much significance in pointing to a test of functional derangement of the nervous system apart from the purely mental phenomena concerned. I have more particularly in mind what we may call a rheumatic group or more specifically a muscular-rheumatism group, in which the heart muscle is involved.

The muscular-rheumatic individual is known to every practitioner. In addition to being rheumatic, he is usually of a high-strung nervous temperament. He gets muscular pains, lumbago, pseudosciatica, etc., on almost any exposure to damp or cold, in either summer or winter. In some cases the involuntary muscles are involved in the pain process. One such patient during the past winter, exposed to a chilling on a boat in a damp, cold spell, developed violent pain in the intestinal musculature. With every bowel movement, with even the usual peristaltic movements, there was intense, cramplike pain. The abdominal muscles were rigid and boardlike. There was, however, no febrile or pulse reaction, and the condition promptly cleared up under heat and salicylates.

In many cases of what appears to be angina pectoris after fifty, a detailed history will show that for many years previously, a precordial distress, even a precordial pain has occurred from time to time that would yield promptly to antirheumatic treatment or clear up of itself, as the case might be. When focal infections are involved, these symptoms are naturally accentuated. A heart of this type is usually oversensitive to nicotine.

Instead of a merely mental situation, we are compelled to look on these cases as actual disease processes. Instead of neurasthenia, they may be considered from the same clinical viewpoint as lumbago and like processes.

In cases of anginal pains, angina pectoris, if you will, without the special electrocardiogram, however, it is always advisable to try out as a matter of therapy the treatment for muscular rheumatism. While the salicylates in full dosage may give immediate effect, I mean by the antirheumatic treatment not only the drug, but the removal of the focal infections, gastro-intestinal and other intoxications, and a sane attention to the general muscular system by massage and graduated exercise.

Occasionally I play golf with a judge whose case, two years ago, was diagnosed as angina pectoris. He was advised to give up his court, and prepare for death, on the basis of a clinical angina pectoris and a tachycardia. With the removal of focal infections about the teeth, a prolonged rest, freedom from worry, etc., all of his symptoms disappeared.

From a clinical-therapeutic standpoint it is therefore important in this group of anginal cases to differentiate them from true angina pectoris by an expert interpretation of the electrocardiogram and a study of the case from the angle of the focal infections and the carbohydrate metabolism. It is surprising how quickly the pain symptoms will disappear with the elimination of focal infections, the use of salicylates, and antirheumatic treatment.

In this paper I have not given any consideration to the groups of so-called neurasthenics due

to latent or slightly active tuberculosis, to low-grade kidney conditions, to the intoxications from focal infections, etc. These groups have already been carefully worked out and given full consideration. I have been more particularly concerned in this paper with a possible interpretation of the so-called essential neurasthenias.

In dealing with the functional derangements of the central nervous system, we have been too much concerned with the psychologic end results, rather than with the basis of the functional derangement. It is not sufficient for our purposes to say with Weir Mitchell that fat changes the mental outlook of these cases. It is much more important to find out why this should be so.

The work of Dr. Pitfield with insulin, and Dr. Fay's work on the effect of dehydration in the convulsive states—a very important group—points the way to the proper interpretation of the functional derangements of the nervous system, both the neuroses and the psychoses.

2025 Walnut Street.

A REVIEW OF 205 CASES OF FUNCTIONAL NERVOUS DISORDERS WITH THE REACTIONS OF THE CIRCULATORY SYSTEM*

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It is widely appreciated that the incidence of cardiac symptoms in those suffering from functional nervous disorders is high. Smith, in the *Post-Graduate Medical Journal,* II, 136, in speaking of the liability of the heart to become the seat of nervous disorders, remarks that in the presence of emotional stress the heart intrudes itself most obviously upon the consciousness, and calls attention to the fact that our language shows that emotions from of old have been considered to originate in the heart; i. e., he gives the expressions: heart in mouth, heart sank, lost heart, heart in boots, heart broken, heart torn, heart rent, heart aching for, warm hearted, full heart, large heart, and small, hard, cold, or black hearted.

Because of this cardiac consciousness, it is natural that many patients suffering from neurasthenia and psychoneurosis should develop cardiac symptoms, and it was thought that a review of the reactions of the circulatory system in a group of neuroses would be interesting.

The neuroses are grouped as follows: (1) Neuroses associated with organic heart disease. (2) Neuroses associated with arterial hypertension. (3) Neuroses associated with arterial hypotension. (4) Neuroses associated with arteriosclerosis. (5) Neuroses associated with toxemia. (6) Neuroses associated with faulty endocrine secretions. (7) Neuroses associated with low nerve reserve. (8) Neuroses associated with central nerve disease. (9) Neuroses associated with psychogenic factors. (10) Combinations of two or more of the above.

Table 1 gives the number of cases in each group, with the per cent of the total number of cases which this comprises.

Table 2 gives the percentage of cases in each group which showed the following reactions: (a) Subjective symptoms referable to the heart; i. e., precordial pain, palpitation, dyspnea under emotional stress, consciousness of extrasystoles. (b) Vasomotor instability; i. e., cold and cyanotic extremities, dermographia, or abnormal sweating or flushing. (c) Faulty effort reactions; i. e., increase of more than 20 in pulse rate or fall of more than 10 in blood pressure, when changing from the lying to the standing position; failure of heart to return to normal in two minutes after moderate exercise (sitting up and lying down ten times). (d) Tachycardia; i. e., heart rate over 90 in the lying position. (e) Subjective symptoms of weakness and exhaustion.

TABLE 1

Group Number	Neuroses Associated With	No. of Cases in Group	Per Cent of Total Cases
1	Organic heart disease .	26	12.6
2	Arterial hypertension .	35	17.0
3	Arterial hypotension .	79	38.5
4	Arteriosclerosis	23	11.2
5	Toxemia	62	30.0
6	Faulty endocrine secretions	43	21.0
7	Low nerve reserve ...	40	19.5
8	Central nerve disease .	10	4.9
9	Psychogenic factors ..	28	14.0

Table 3 gives the number of cases in each group having focal infections and malnutrition.

No attempt has been made to describe a symptom complex for each of the groups, partly because the same patient can fall into more than one group and partly because the same symptoms are often characteristic of more than one group.

However, some symptoms are found more frequently in one group than in another; e. g., loss of memory in the arteriosclerotic group, and sudden panic with fear of death in the group of psychogenic origin.

(1) The group of functional nervous disorders associated with organic heart disease in-

*From the Daniel J. McCarthy Foundation of the Philadelphia Institute for the Study and Prevention of Nervous and Mental Diseases. Data collected from cases from the files of Dr. D. J. McCarthy.

TABLE 2

Reactions	Group Numbers								
	1	2	3	4	5	6	7	8	9
(a) Symptoms referable to the heart	58.3	16.6	32.0	20.0	30.0	16.1	37.5	12.5	43.3
(b) Vasomotor instability	75.0	41.0	68.0	30.0	90.0	70.9	65.0	62.5	53.3
(c) Faulty effort	83.3	75.0	64.0	70.0	75.0	67.7	67.5	75.0	66.6
Faulty effort (marked)	58.0	41.7	40.0	40.0	45.0	45.0	17.5	25.0	33.0
(d) Tachycardia	70.0	33.0	66.0	62.0	65.0	60.0	60.0	83.0	66.0
(e) Weakness and exhaustion	58.3	50.0	72.0	80.0	50.0	61.2	87.5	37.5	50.0

cluded disorders ranging from acute psychoses to the milder neuroses. Fifty-eight per cent of the patients had symptoms referable to the heart, a higher percentage than occurred in any other group. The degree of heart damage bore some relation to the intensity of the nervous phenomena; i. e., with dilatation, arhythmia, edema, etc., acute delusional insanity may occur. With establishment of compensation, the mental disorder may wholly or partly clear up.

The fears engendered by the knowledge of heart disease or by the mental trauma produced by attacks of dyspnea or angina pectoris react in a vicious cycle to cause further cardiac neuroses.

(2) The hypertensive group of cases had the lowest incidence of symptoms referable to the heart (16.6 per cent), the second lowest vasomotor instability (41.6 per cent), one of the highest percentages of focal infections (83.3 per cent), and the lowest degree of malnutrition (16.8 per cent). Tachycardia seldom occurred. From this group have been excluded those having evidence of heart disease other than moderate left ventricular preponderance.

(3) As Craig *(Lancet,* 1898, 1: 1742) and others have shown, neurasthenia and psychoneurosis are most often associated with a low blood pressure. In this series, 79 (or 38.5 per cent) had a blood pressure below 110.

These patients complained of weakness and exhaustion in 72 per cent of the cases. Occipital headache and depression occurred frequently.

Lowering of the blood pressure by means of drugs increased the symptoms. A rise in blood pressure was usually accompanied by clinical improvement. In this group many of the patients suffered from malnutrition (44 per cent) and had a soft, flabby musculature. Overfeeding diets with daily deep muscle massage and electricity often brought about a rise in blood pressure. Most frequently the low blood pressure was associated with an old healed pulmonary lesion.

(4) In neuroses associated with arteriosclerosis, the more typical nervous disorders were agitated depression, insomnia in the early mornings, loss of memory, disorientation, and delusions of poverty. Only 20 per cent of them complained of symptoms referable to the heart. The incidence of focal infections was high—90 per cent. Vasomotor instability was lower here than in any other group—30 per cent. More marked and frequent malnutrition occurred here than in any other group.

(5) In neuroses associated with toxemia, the toxemia formed the principal etiologic factor discovered in 62 (or 30 per cent) of the cases, and was comprised of the following: Focal infections, 23 cases; alcoholism, 10 cases; gastrointestinal, 6 cases; hyperthyroidism, 5 cases; amytal poisoning, 1 case; bromoseltzer, 1 case; cocain, 1 case; diabetes, 2 cases; total, 49 cases.

As would be expected, the greatest percentage of cases showing vasomotor instability occurred here, 90 per cent of the cases exhibiting this phenomenon. Seventy-five per cent of the cases had faulty effort tests. The incidence of malnutrition and of tachycardia were high. Although focal infections were found in 80 per cent, toxemia from them was considered the primary factor in only 23 cases.

(6) The faulty endocrine-secretion group included the large group of neuroses associated

TABLE 3

	Group Numbers								
	1	2	3	4	5	6	7	8	9
Focal infection	91.6	83.3	76.0	90.0	85.0	70.9	75.0	75.0	76.6
Malnutrition	41.6	16.6	44.0	80.0	50.0	54.8	42.5	....	50.0

with the menopause, and these comprised 70 per cent of the group. The symptom complex is well known—depression, emotional instability, occipital headache, self-accusation, weakness, and exhaustion being among the more prominent and frequent symptoms. Often the symptoms are precipitated by sudden shock. Symptoms referable to the heart were very low—16.1 per cent. Malnutrition was infrequent here—22.5 per cent. Cardiac effort tests showed that they were slightly faulty in 67 per cent of the cases, and markedly so in 45 per cent. The neuroses of the patients with faulty endocrine secretions more often border on the psychoses than in those in whom there is no imbalance of the glandular secretions. The hyperthyroid cases have been grouped with the toxemias.

(7) The patients with low nerve reserve numbered 40, or 19.5 per cent of the cases. In many, the low reserve was secondary to chronic disease or malnutrition or repeated or continuous toxemias. In others, intense activity over long periods of time was responsible for the disorder. Weakness and exhaustion were complained of here more frequently than in any other group—87.5 per cent. While 42 per cent exhibited malnutrition, 66 per cent had tachycardia. A sudden onset of cardiac symptoms, with fear that death was about to take place, occurred as frequently in this group as in the psychogenic group. The patient frequently complained that he could not make a decision, or was appalled by thoughts of completing a piece of work.

(8) The reactions of the circulatory system in cases with central nerve disease were limited here to observation in cases of Parkinson's disease in which there is practically always a tachycardia, probably of central origin. Symptoms referable to the heart occurred with relative infrequency, comprising only 12 per cent. Vasomotor instability occurred in 62 per cent, focal infections in 75 per cent, and faulty effort in 25 per cent. Electrocardiograms were almost invariably normal.

(9) In this group the cardiac symptoms were of unusual prominence. Here occurred violent and sudden palpitations, transient arhythmias coincident with severe gastric disturbances, fear that death was imminent, fear of closed rooms, of being on trains, of being alone, or of working in mines. The following were common: muscular hypertension and tremor, quickened and deepened respiration, diuresis, diarrhea and vomiting, ready confusion of mind, and diminished concentration. More frequent but less spectacular were anxiety neuroses—vague undefined fears of heart disease or of impending disaster. The incidence of cardiac symptoms was highest here, excluding the group with heart disease.

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NERVOUS REACTIONS IN GIARDIASIS*

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The objects of this report are threefold:

The first is to emphasize again the need for careful and thorough routine physical studies in every case which presents nervous symptoms. It cannot be urged too strongly that every little clinical sign, no matter how apparently irrelevant to the chief complaint, may have some bearing on the etiology of the case under consideration. No detail is too small to deserve the most exhaustive investigation for the "raison d'être." This is particularly true in nervous cases, in which so often the physiochemical side is submerged in the overwhelming nervous symptomatology.

The second object is to point out that an infestation by giardia can be of great importance to the patient. Until recent years this parasite was considered a fairly inconsequential and even harmless occasional inhabitant of the human intestine. A number of publications during the past few years, however, have demonstrated this subject to be of increasing interest to the medical profession. Drs. Lyon and Swalm have called attention to a greater prevalence of giardiasis than was formerly recognized. Of added interest is its stubborn resistance to treatment and the severity of the clinical findings at times associated with this infestation.

The third object is to call attention to the fact that giardial infestation does really occur in the gall bladder. Heretofore it has been supposed that the giardia inhabit the gall bladder since they have often been found in biliary drainage to be present only in the gall-bladder fractions. It has now been demonstrated by cholecystectomy that the giardia do inhabit the gall bladder as well as the biliary passages, the appendix, and the rest of the intestine.

The four cases herein discussed are quite different from one another in their chief manifestations. However, all are similar in their psychoneurotic phases, in that all the patients suffered from depression, introspection, insomnia, restlessness, irritability, and extreme fatigue. All gave a history of so-called "nervous indigestion" early in their illness. The other constant factors were secondary anemia, icteric sclera, muddy

* From the Daniel J. McCarthy Foundation of the Philadelphia Institute for the Study and Prevention of Nervous and Mental Diseases.

"hepatic" skin, chronic constipation, hypotension, and giardial infestation with duodenitis.

These cases were studied in great detail, but only positive findings are reported in brief as follows:

CASE 1. Miss M. McC., single, aged 42, registered nurse, complained chiefly of nervous symptoms with the onset two years prior to her first visit. She suffered from severe depression, was greatly worried about herself, had a profound sense of incompetency and a fear that other people would discover it, insomnia, and considerable irritability. She complained of poor digestion, eructations and distention, chronic constipation, loss of appetite, and severe digestive disturbances after nervous fatigue. She had been told many times that she had "nervous indigestion." Other complaints were frequent migraine headaches, extreme fatigability, and increasing deafness.

Physical examination showed her to be undernourished and underweight. There was an extreme pallor with a muddy discoloration about the eyes, mouth, and neck, slightly icteric sclera, and a yellowish-white, tooth-marked tongue. The abdomen was gaseous, the blood pressure low, the myocardial tone poor, and there was a slight thickening of the tympanic membranes.

Laboratory studies showed a marked secondary anemia and a transient albuminuria. Gastric analysis showed a low hydrochloric-acid curve. On biliary drainage giardia were found in the duodenal and biliary content, and a mild catarrhal cholangitis and duodenitis were found to be present. The roentgenogram was negative except for colonic stasis.

Suitable hygienic measures were instituted, including routine rest, mild exercise, fresh air, and sunshine. An overfeeding laxative diet, with dilute hydrochloric acid after meals, was prescribed. To attack the giardia, a series of biliary drainages over a period of months was undertaken. Three doses of neoarsphenamin (0.6 gm.) were given intravenously at five-day intervals, and at the end of six months another series of three were administered. Twice this arsenical solution was injected through the biliary tube; but this produced considerable nausea and so was not again attempted.

At the end of the first series of intravenous treatments giardia could not be found. Just prior to the second series, six months later, a few were again demonstrable, but none were found after this second series, although drainages were continued every three months for two years.

During the first few months there was marked improvement in the patient's condition, and this has continued to date. The nervous symptoms were very much less evident. She was confident and cheerful. Rarely, a migraine headache brought slight depression. Her digestion was reasonably good, and her constipation became a minor factor, well controlled. Her weight became normal, and the anemia persisted to only a slight degree. The deafness continued progressively worse, but she was now willing to undertake lessons in lip reading which she had persistently refused for a long time.

It is interesting to note that the disappearance of the psychoneurosis promptly followed the eradication of the giardia, which had in turn permitted the body chemistry to return to within normal limits. Focal infections of bacterial origin had been eliminated some time before in an effort to retard the increasing deafness, but this had not made an appreciable difference in the nervous phase of the case. Psychogenic factors were investigated, but seemed relatively unimportant. The biliary drainage which demonstrated the infestation in this patient was undertaken as a routine means of ruling out all foci, especially since there was a slightly icteric sclera and a muddiness of the skin about the mouth and neck.

It would seem that in this patient the giardial infestation did play an important rôle as one of the chief etiologic factors in the psychoneurosis.

CASE 2. Mr. H. W., single, aged 33, a lawyer, placed the onset of his symptoms eight months prior to his first visit. He complained of severe depression, irritability and restlessness, inability to concentrate, loss of interest in everything except himself, insomnia, indecision, fear of meeting people lest they recognize something terribly wrong with him, a feeling of wasting away, and some sexual fears and self-accusation. There was a dull pain in the lower right abdomen, gaseous distention with frequent eructations which had been diagnosed as "nervous indigestion," slight constipation, a sour taste all the time, anorexia, and loss of weight and strength.

Physical examination showed him to be under par and underweight, with a brownish discoloration of the skin and icteric sclera, yellowish-white tooth-marked tongue, slightly increased liver dullness, slight tenderness of the lower right abdomen to deep palpation, spastic anal sphincter, low blood pressure, poor heart tone, and myxedema. There had been a focal infection in the tonsillar area, which was eliminated two months after the onset of his illness.

The laboratory studies showed moderate secondary anemia and moderately low kidney function (55 per cent). A gastro-intestinal study disclosed a duodenitis with giardiasis in the biliary study and also in the stool examination. Only a spastic colon was revealed by the x-ray study.

The patient was put on a routine of rest, occupation, exercise, and nerve tonics, and was overfed on a laxative diet. He was given three doses of neoarsphenamin (0.6 gm.) intravenously at irregular intervals in five weeks.

This patient was uncoöperative, and refused to accept further intravenous therapy, biliary drainage, or sanatorium care. Three weeks after the last intravenous injection of neoarsphenamin a stool examination proved negative for parasites or ova. Some months later he reported that he had been much worse, even suicidal, but that now he was well and on his way to Europe. However, he appeared to be in a hypomanic state. He would not submit to any further investigation or study, and his family would not take action. A few months later he was seen in a mental hospital in an acute maniacal state, from which apparently he is gradually recovering.

Psychogenic factors were present in this case in that there had been some sexual irregularities that worried the patient. Previous similar experiences, however, had not worried him in the least when he was well and vigorous. It would seem that the tonsillar infection and the giardial

infestation together were battering down this man's resistance to a point at which his nervous system was overwhelmed by a manic-depressive psychosis, which in turn was colored by the psychogenic factors, as were also the preliminary psychoneurotic manifestations. In the presence of the giardia, the tonsillectomy made no impression on the course of the illness, and the persistence of the infestation permitted things to go from bad to worse.

CASE 3. Mr. E. A. C., married, aged 32, business executive, placed the onset of his symptoms nine months prior to his first visit. He complained of nocturnal epileptiform convulsions every six weeks, and gave a history of petit-mal episodes for ten years prior to these grand-mal attacks. The first of the latter seizures followed immediately after a tonsillectomy. The patient was depressed, worried, irritable, apprehensive, was losing confidence in himself, and had insomnia. He complained of gaseous distention and eructations which had been called "nervous indigestion," also of frequent coryza and bronchitis.

On physical examination he was found to be robust and well nourished, but with a muddy skin, icteric sclera, deflected septum with partial obstruction and postnasal infection, dental infection, a yellowish-white, tooth-marked tongue, gaseous abdomen, colonic stasis, poor heart tone, and low blood pressure, with a faulty reaction to effort.

The principal laboratory findings were hyaline and granular casts in the urine and low kidney function (40 per cent). A high nonprotein nitrogen (30 mg.) was shown by the blood chemistry, and biliary drainage revealed slight duodenitis with giardiasis.

The patient was placed on a hygienic routine, with mild exercise, fresh air, and rest, and an effort was made to eliminate the worrying factors in his work. He was given a nephritic diet and extra liquids. An effort was made to eliminate focal infections. A dental abscess was removed, postnasal infection was treated by local measures, and submucous resection was scheduled. A series of biliary drainages were undertaken, and three doses each of 0.6 gm. of neoarsphenamin were administered intravenously at intervals of one week. Four months later he was given another series of three injections of 0.6 gm., 0.9 gm., and 0.9 gm. respectively. One grain of luminal at bedtime was advised.

After the first series of injections no giardia were found. For four months the patient seemed quite well. Then he developed an acute bronchitis, and had one seizure during the acute infection. Giardia were again found at the next drainage. After the second series of intravenous treatments, no more evidence of the infestation was obtained, though biliary drainages were continued throughout the year.

At the end of a year from the beginning of treatment, he developed another seizure, which seemed to have been precipitated by excessive business and financial worries, extreme irregularities of living, and a discontinuance of the luminal. The stools continued negative for parasites or ova. The patient is still irritable and at times depressed. The renal function has improved, and the digestive factors are insignificant.

This case demonstrated regular convulsive episodes apparently toxic in origin and precipitated by reflex factors. Here we have a man with definite kidney insufficiency and colonic stasis, combating focal infections and intestinal parasites, which in turn are producing disturbed circulatory reactions. His threshold of resistance was so low that any increase in the burden —acute infection, intestinal stasis, nervous fatigue, or withdrawal of controlling medication —would precipitate an attack. The giardiasis in this instance was only one of the contributing factors, but an important one, and emphasizes the need for thorough study to rule out all possible disturbing elements in every nervous case.

CASE 4. Dr. A. K., single, aged 48, a physician, first experienced symptoms eight months before his first visit. He complained of numbness, tingling, and loss of power in forearms, hands, and legs. He was greatly depressed, extremely introspective, very restless, irritable, anxious, and sleepless. He was troubled with phobias and feared he might have syphilis or mercurial poisoning, and test after test continued unconvincing. He suffered with frequent severe migraine headaches. He was chronically constipated, and had chronic indigestion, with eructations and occasional vomiting associated with the headaches, supposedly of nervous origin. He also complained of backache and a weak back, and profound general weakness.

The principal findings at the physical examination were that he was under par and underweight, with a yellowish-brown skin, slightly icteric and pale, icteric sclera and mucous membranes, and yellow tongue posteriorly. The abdomen was gaseous and resistant, and the liver area small, with dilated upper abdominal venules. Other findings were arteriosclerosis, a moderately low blood pressure, postnasal infection, a small old healed pulmonary lesion, slight scoliosis, and marked myxedema. Detailed neurologic studies were negative.

The principal laboratory findings were slight secondary anemia with an eosinophilia of five per cent, slightly reduced kidney function with indicanuria, and a blood nonprotein nitrogen of 40 mg. Gastric analysis showed no free hydrochloric acid, and biliary drainage demonstrated duodenitis with a very severe giardial infestation. Both Streptococcus hemolyticus and Streptococcus viridans were obtained in a culture from the stool. The x-ray showed that the gall bladder did not fill properly. The appendix was tender and there was colonic stasis.

The patient was placed on a hygienic régime embracing regular exercise, fresh air, and sunshine, with moderate exercise and an interesting occupation. He was given an overfeeding, low-protein, mildly laxative diet and extra liquids, with dilute hydrochloric acid after meals. Three doses of neoarsphenamin (respectively 0.4 gm., 0.6 gm., and 0.9 gm.) were administered intravenously at four-day intervals. Each dose was followed by a saline cathartic. Biliary drainage was undertaken once a month for four months. Then another series of three intravenous doses of neoarsphenamin was scheduled.

After the first series of injections the giardia were still present, but in very much reduced numbers. The putrid odor of the stools, which had existed for over a year, disappeared. Stool examinations for the next several months remained negative for both giardia and streptococci. The anemia improved markedly, and the psychoneurotic manifestations almost disappeared. The

fact that his ailments could be explained by a definite etiologic factor made a tremendous mental impression upon this patient, and the pseudoparesthesias vanished, as did his depression and fears, and many other of his ailments.

After about eight months he again became mildly depressed, there was a gradual return of the anemia, and the eosinophils rose to 5 per cent. Examination demonstrated giardia present in large numbers. This time the patient insisted upon cholecystectomy and appendectomy, arguing that this was justified since the x-ray had demonstrated gall-bladder and appendiceal pathology, and the biliary drainages had originally shown the giardia in greatest numbers in the gall-bladder fractions of the material obtained.

About eighteen months after the onset of symptoms cholecystectomy and appendectomy were performed in Washington, D. C. The laboratory reports sent from Washington showed that the gall bladder was grossly negative, but the diagnosis on section was chronic irritative catarrhal cholecystitis with submucous desquamation and cellular reaction (ulceration). The appendix was also grossly negative, but on section the diagnosis was chronic interstitial and catarrhal appendicitis with desquamation and cellular reaction (ulceration). Giardia cysts were demonstrated in the contents of the gall bladder. Scrapings from the adherent mucus and from cells of the mucosa showed eight to ten giardia cysts to a field. The appendix contained a still larger number of cysts. No vegetative forms were found, and no activity was demonstrated.

The patient made an uneventful surgical recovery, but there has not been an opportunity for further studies to date.

This case is of considerable interest in that it definitely establishes the giardia as an inhabitant of the gall bladder and the appendix, as well as the rest of the intestinal tract. The severity of the nervous symptoms in this case was outstanding, for they were so overwhelming as completely to incapacitate the patient for many months. The marked improvement after the first few treatments may have been due to the following factors: the lessening of the giardia, the elimination of the streptococci, and the psychic influence of a tangible object for attack in a vague and incapacitating illness.

Summary

The four cases presented may be classified from a nervous standpoint only as (1) psychoneurosis with depression, (2) reflex convulsions, (3) manic-depressive psychosis, (4) psychoneurosis with pseudoparesthesias. Obviously in such a widely different group giardia can be considered only as a contributing etiologic factor, though a very important one.

Drs. Lyon and Swalm have noted that in giardiasis restlessness and insomnia have been observed, and in one case in a child convulsions occurred. All four of these cases showed depression, restlessness, irritability, insomnia, introspection, and fatigability. The headache in each case was of the migraine type. Lyon and Swalm noted this fact in five out of eleven cases of giardiasis with headaches. They also reported twelve with constipation in a series of twenty cases. The four reported above all suffered from constipation. They also complained of distention and belching. Lyon and Swalm found twelve in their twenty with these symptoms.

The fact that so-called "nervous indigestion" was the early diagnosis in each case should put us on guard in every nervous case to study very carefully even the most insignificant clinical sign for its causative agent, in the hope that each fault remedied may bring the patient nearer to the goal of normal health.

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Case Reports*

OPHTHALMOPLEGIC MIGRAINE

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A negress, aged 30, appeared at Wills Hospital on March 19, 1929, with the complaint that six weeks previously her right upper lid drooped and she began to see double and to lose her vision. She went to an eye specialist, who referred her to Wills. She had been in good health except for an attack of grip just before the onset of her eye trouble. There was pain in the affected eye which radiated to the forehead and temple and was intermittent in character. The referring physician wrote that he had refracted her eyes in October, 1928, for the relief of headache, at which time she required the following lenses:

O.D.—75 ax. 105 = 20/15 pt.: O.S.—50 ax. 90 = 20/15 pt.

The patient reported again in February, 1929, that she was still having headaches and that she then had ptosis of the right upper lid. Her physician thought the latter was due to sinus trouble.

Examination showed complete ptosis of the right upper lid. The globe was proptosed and abducted about fifteen degrees, and its movements in all directions were very much limited. There was slight movement outward, and on attempted downward movement the globe rotated so that the upper end of the vertical meridian turned inward. The pupil was 3 mm. in size, and did not react to light. Otherwise the external examination was negative. The media of both eyes were clear except for a pin-point opacity in the right lens, and the fundi were negative. The vision was R=H.M.: L. 6/21 —1. The Hertel exophthalmometer showed a proptosis of 23 mm. in the right, and 18 mm. in the left eye.

The Wassermann and Meinicke tests were both strongly positive. X-rays of the orbit and sella turcica were negative. The teeth on the left side were carious and needed extraction. The rhinologist reported that the nasal septum deviated to the left with a ridge on the left side. There was no evidence of sinus disease, but the tonsils were diseased.

* Read before the Section on Eye, Ear, Nose, and Throat Diseases of the Medical Society of the State of Pennsylvania, Erie Session, October 3, 1929.

On March 26, 1929, the proptosis of the right eye was 24 mm., and of the left 21 mm. There was still complete ptosis. The globe now could not be moved in any direction, and there was pain when it was pushed backward. Potassium iodid in increasing doses was prescribed, and later bismuth and neosalvarsan were given by a syphilologist. These treatments were continued until April 15th, when sight was lost of the patient.

This case is reported mainly because of one of the clinical signs exhibited which is often overlooked, or at least not accorded the attention it merits. This sign indicates preservation of action of the superior oblique muscle, and consists of rotation of the affected eye when the patient looks down. This rotation is clockwise or counter-clockwise, depending upon whether the right or the left eye is involved. The sign was present in this case, but disappeared in about a week, showing that the trochlear nerve had become involved in the paralysis. At the same time the proptosis decreased relatively. This helped to confirm our opinion of the trochlear involvement, as the oblique muscles help to keep the globe forward.

Ophthalmoplegic migraine, Charcot's ophthalmic migraine or recurrent oculomotor paralysis, has been defined as a paralytic ptosis which may exist alone or in conjunction with paralysis of the other ocular nerves and which is preceded by an attack of migraine. It is a rather baffling and therefore interesting affection concerning which there is still much to be learned. Some clinicians are prone to pass these cases by with the statement that they are nuclear lesions. This may be true of those cases in which the third nerve alone is involved, although the few autopsies on record show lesions of the nerve trunk. In the cases in which the fourth and sixth nerves are implicated, however, it would appear that the lesion must of necessity be at or near the apex of the orbit.

The recurrent character of this affection is also very interesting and quite inexplicable, and it is still a moot question as to whether the migraine causes the paralysis. It seems more logical to suppose a common origin for both the migraine and the paralysis, or, as Möbius suggests, to look upon the migraine as an aura. It is unfortunate that roentgenography is not helpful, and it is to be hoped that the technic for photographing the optic canals and orbit will be developed, so that additional evidence as to orbital disturbances may be available. Possibly future research in vascular conditions of the orbit and brain may help to explain these cases. For the present, however, we must depend mainly on acuteness and thoroughness of clinical observation. These cases should be regarded as of intracranial origin rather than as local eye affections.

230 South Twenty-first Street.

LARYNGEAL VERTIGO

FREDERICK J. BISHOP, M.D.
SCRANTON, PA.

In 1876 Charcot first described the symptom complex which he termed "laryngeal vertigo" as follows: "The patient feels a tickling in the lower part of the larynx, a sort of heat or burning, then a little dry cough occurs, followed by a kind of attack, during which the patient collapses and loses consciousness. He is purple, turgid, and presents convulsive attacks of one or two limbs, on one or both sides. The attack is short, and the patient can resume his conversation. In some cases he had lost remembrance of what occurred during his fall. At times the tickling is very slight and causes simply a dizzy state without proceeding to a fall. At other times it is only a breathlessness. These attacks may be repeated fifteen or twenty times a day. Finally, this crisis has the appearance of an epileptiform attack, preceded by a spasm of the glottis of variable intensity."

In 1892, when Luc's monograph was written, about twenty authentic case reports had been published, so that it is a rare as well as a curious form of spasm of the larynx. Some time later Getchell reviewed the literature of seventy-seven cases.

Synonyms: Browne termed the complex "laryngeal epilepsy" or "complete glottic spasm in adults." W. C. Phillips suggested "laryngeal syncope," and D. B. Delevan "laryngeal crisis." Getchell concluded that the condition was due to unstable equilibrium of the central nervous system, and called it "le petit mal." Sir St. Clair Thomson used "laryngeal ictus."

Laryngeal vertigo is neither a distinctly sensory nor a distinctly motor disturbance, but transitional between the two. Essential or characteristic symptoms are expiratory spasms and short duration of unconsciousness.

Mr. G. M. G., aged 46, a mining engineer, of excellent physique and active habits, called at my office May 3, 1929, and reported the following history: The previous night he was awakened by a tickling feeling in his throat, followed by a severe attack of a dry cough. This becoming more severe, he was unable to get his breath and finally became cyanotic. There was slight twitching of both limbs and severe anxiety and gasping for breath. He finally got on his knees on the floor and fell unconscious. The whole attack lasted for two or three minutes, the unconsciousness for a shorter time. When the patient suddenly became conscious again, he realized most of what had happened, and after a very

short time was able to converse and return to his bed. His pulse at this time was imperceptible. Outside of some children's diseases, he stated that he had never been sick a day in his life except for these attacks, of which he had had nine in the past twelve years. Some of the attacks had not been severe and others more so. This was the hardest one of all.

Examination the morning following this attack revealed the following findings: The tonsils had been removed several years ago, with a very nice result. The pharynx was normal. The larynx, on indirect examination, showed a very slight redness over the arytenoids. There were no notable swellings, and the cords looked normal.

The anterior parts of the middle turbinates were removed four years ago, and at this examination a pedunculated mass from the left middle turbinate in contact with the septum was discovered and removed. Otherwise the nose was in good condition. The pathologist reported that macroscopically the mass was about the size of a lima bean, and microscopically the sections showed a glandular arrangement of benign adenoma. The basement membrane was everywhere intact, and there was no evidence of infiltration or invasion of the surrounding tissue. The diagnosis was benign adenoma.

Five months afterwards, the patient had had no symptoms of any kind, and no return of the paroxysms.

UNILATERAL OPHTHALMOPLEGIA TOTALIS PROBABLY DUE TO ENCEPHALITIS LETHARGICA

J. DEWITT JACKSON, M.D.
ERIE, PA.

CASE 1. Mrs. C., aged 21, within three years had two attacks of pain over the right eye or between the eyes, not following coryza. Two and a half weeks before I saw her she had slight pain over the right eye, and it had gradually been growing more frequent and severe for the past few days, accompanied by nausea and vomiting. Vertigo was present with the nausea, and the headache was made worse by stooping forward, and was relieved by closing the eyes and by sleep. Lacrimation of the right eye was present during the attack.

Vision with the right eye was 20/50 —1, and with the left eye 20/40 —1. The vision of both eyes was corrected to 20/15 —1 after the use of homatropin followed by eserin. The esophoria was 3 degrees, the accommodation 10 diopters, and the convergence normal. The sinuses were negative to transillumination and inspection, and all the teeth were vital.

The patient reported on the third day after the use of the cycloplegic that her headache was relieved during the time it was effective. Upon this occasion the pupils and accommodation were back to normal. Five days later her physician informed me that she had had nausea with diplopia and paralysis of the internal rectus muscle, and that the pupil of one eye was again dilated. She was sent for, and examination showed that the right upper lid was completely paralyzed, the pupil fully dilated, with no response to light or accommodation, and motion of the eyeball was nil except slightly in an outward direction. There was no converging power nor accommodation. The patient had to be assured that the cycloplegic had not produced this striking catastrophe. The nose again was found to be normal, and x-rays of the sinuses were normal. The blood Wassermann was negative.

This occurred October, 1928, and her physician informs me that she has recovered enough function that the ptosis can be observed only on close inspection. The present condition of the other muscles cannot be described, as the patient lives out of town and failed to accept an invitation to report.

The diagnosis of encephalitis as the etiologic factor in this case was confirmed by the Cleveland Clinic.

CASE 2. A ten-year-old girl seen on November 9, 1928, had had severe headaches for three years. Three days before this visit the right eye began turning in, with diplopia, accompanied by frontal and occipital headache. There was a suspicion of tuberculosis in this case, but the examiners did not agree. The child had had coryza since the paralysis had been present.

The vision with the right eye was 20/20 —4, and with the left eye 20/15 —4. The pupillary reaction to light and accommodation was normal. The right pupil measured 6 mm., and left 7 mm. The accommodative power was normal for the age of ten, but there was complete paralysis of the external rectus of the right eye. The sinuses were normal.

Ten days later, November 19th, the condition had progressed until the right upper lid was completely closed and there was paralysis of the elevator muscles of the eyeballs. There was no paralysis of the accommodation. The spinal fluid was negative to pressure and to the Wassermann test.

The patient was referred to a pediatrician, who found her temperature to be 99.5°, knee jerk absent, and abdominal reflexes diminished on the right side. Three days later there was paralysis of the accommodation, and the pupils failed to react to light or accommodation.

On November 26th, the child began moving the eye up and down, but not laterally. The left knee jerk was apparently recovered. November 30th she could move the eye in all directions, and the eyes were no longer crossed. The ptosis was about half recovered. December 6th she could raise the lid almost completely, and a red lens over the right eye showed diplopia only upon raising the eyes, and that very slight, with the object light held at three feet. She could count fingers at one foot, but could not read. The fundus did not show a pathologic condition at any time. The perimeter did not show any contraction of the visual field, but there was an absolute central scotoma extending over 18 degrees laterally to 35 degrees downward, as found with the campimeter.

By December 20th there was complete recovery of all muscles except that the accommodation still lagged. The patient could count fingers at six feet. On January 24th the vision with the right eye was 20/15 —3, and with the left 20/15 —1. The child could read more rapidly with the left eye. The lid drooped a little only when she was very tired. The knee jerk was still absent on one side. The child was last seen in September, 1929, and there was then no trace of the previous disease.

There are a number of reports in the literature of optical symptoms in connection with encephalitis, and the symptoms described were in many cases similar to those reported above. As brought out by Hogue in 1921, in nine cases of encephalitis which came to autopsy, hemorrhagic points were discovered involving the optic nerve tissues. Because, as Sluder and Onodi, among others, have emphasized, the course of

the nerve lies in extremely close contact with the posterior ethmoid and sphenoid cells, we were uncertain at one time as to whether our cases might not be due to involvement of these structures, the more so since neither patient gave any history of drowsiness. It is probable, however, that our cases resulted from a lesion in the nerve trunks at the base of the brain, reasoning from the distribution of the nerve fibers to both eyes from each center.

234 West Eighth Street.

CHRONIC EMPYEMA OF THE ANTRUM SIMULATING SARCOMA

CHARLES R. HUGHES, M.D.
PHILADELPHIA, PA.

In comparison with malignant conditions of other parts, sarcoma of the antrum is relatively rare, although I have seen two or three cases in which, after a long-drawn-out illness, the patient finally succumbed. In the case reported below, I took into consideration the following factors: (1) The possibility that a sarcoma may become infected. (2) The possibility of empyema causing cervical adenitis. (3) The age of the patient and loss of weight. (4) The hyperplasia of the intranasal tissues. (5) The red, indurated mass which could be plainly seen and palpated over the region of the antrum. (6) The bloody, serous discharge from the nares produced by pressure on this mass. I made a diagnosis of sarcoma of the right antrum, but the pathologic examination proved it erroneous.

The patient was in the hospital on four occasions: in 1924 for treatment of chronic interstitial nephritis; on January 2, 1929, for radium implantation for disease of the antrum diagnosed as probable sarcoma with fistula; on February 18, 1929, for radium implantation; and from March 28 to April 17, 1929, for an operation upon the right antrum.

When admitted on February 18th, the x-ray report was as follows: "The accessory nasal sinuses disclose complete occlusion of the normal air density of the right antrum, the right sphenoidal division, the right ethmoids, and almost all of the right nasal passage. The right frontal sinus is partially occluded. Such a complete occlusion of the nasal passage would seem to indicate the presence of some form of tumor growth not demonstrable to the x-ray. There is no radiographic evidence of bone erosion in either antrum or right nasal passage. Difficulty was experienced in obtaining the films because of the psychosis. (?) I should suspect tumor growth, with a probable pus collection in the antrum."

The chief complaint was a bloody discharge from the right side of the nose, which had not improved since the treatment on January 2d. This was more profuse at night, and pressure on the right cheek would induce a profuse bloody discharge from the nostril. A diagnosis was made of sarcoma of the right antrum, and 150 mg. of radium in brass and aluminum filtration capsules was applied over the right maxillary sinus. This was removed after twelve hours, and the patient was discharged on February 19th with instructions to report at a later date.

On March 28th she was readmitted for operation. The ethmoids were cleaned out as well as possible, and a section was sent to the laboratory. Profuse hemorrhage was produced. The usual incision for a radical maxillary operation was made above the teeth. The hard mass in the tissues of the cheek was cut into, and found to be a large abscess cavity filled with foul pus. A hole the size of a quarter was found in the exterior plate of the maxillary antrum, filled with pus. The sinus into the nasal cavity was curetted and enlarged. The antrum was curetted and a section was sent to the laboratory. The incision was left open for drainage and irrigation.

The pathologist reported that there was no evidence of malignancy, and a diagnosis was therefore made of empyema of the right antrum. The patient was discharged on April 17, 1929.

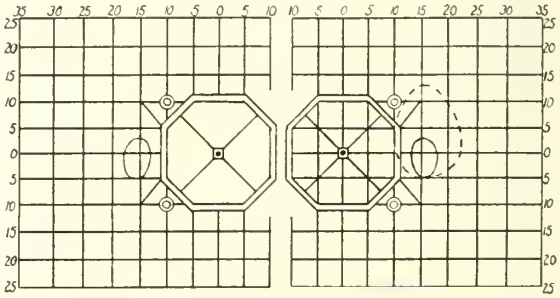
1910 Spruce Street.

COLOBOMA OF RIGHT OPTIC DISK IN A TWELVE-YEAR-OLD CHILD

G. WILLIAM SCHLINDWEIN, M.D.
ERIE, PA.

As the patient's father deserted shortly after her birth, nothing is known at present as to his state of health. Her mother is living and well, and reported no other pregnancies.

The patient had had measles, pertussis, varicella, and several attacks of pneumonia. Her mother thought the child was not very well, as she suffered greatly from headaches, especially the preceding winter. She had never had any other eye trouble, and the present condition was discovered only through a routine examination made at the request of the school examiners, who found some difficulty in distant vision and that the patient could not see the blackboard very well.



Vision with the right eye was 20/40 S. + 4.50 cyl. + 0.50 ax. 180°=20/20. With the left eye it was 20/40 S. + 5.50 cyl. + 0.75 ax. 90°=20/20.

Ophthalmoscopic examination showed the right optic disk to be abnormally large but quite uniform in outline, the margins being elevated about 3 D. above the center. The greater collection of vessels entered from the upper margin in two groups. An artery and vein entered from the lower temporal margin, and one vein to the lower nasal side of the disk. A group of very fine vessels lay in the center of the disk. The entire disk margin was outlined with choroidal pigment. At the lower portion of the fundus there was a suspicion

of a choroidal coloboma, extending well into the ciliary region. The macula was distinct.

The visual fields showed no scotomata, and were well within normal limits for all colors. The blind spot was abnormally large, as shown on the accompanying chart taken with a stereocampimeter.

138 West Ninth Street.

ABSTRACT OF DISCUSSION OF CASE REPORTS

OWEN M. SHREVE, M.D. (Erie, Pa.): In connection with the subject of ophthalmoplegic migraine I should like to describe a case I had three years ago. A lady, aged 67, who had been a patient of mine for about ten years and had a history of having violent sick headaches, came to my office one day for refraction. The examination was finished about midday when she took her prescription to the optician and the afternoon was rather a trying ordeal for her. When I went into my waiting room about four o'clock she was sitting there, having returned with her glasses. She told me she had a terrible pain in her head. I asked her to lie down on the couch. She said, "I couldn't get there." My nurse and I helped her to the couch and she had all the symptoms of a severe sick headache.

I knew her past history, that sometimes her headaches would become so severe her family physician had found it necessary to use morphin. With this in mind I asked a neighboring general practitioner to see her with me, and we gave her morphin, but it was about nine o'clock before she was able to leave my waiting room.

The next morning I found she had had a bad attack during the night and had been taken to the hospital. I did not reach the hospital until late that afternoon, and when I arrived she had gone through the usual departmental work, Wassermann, etc. She had complete ophthalmoplegia of the left eye, ptosis, dilated pupil, and I found a rather large retinal hemorrhage in this eye and a small retinal hemorrhage in the right eye. I saw no other diagnosis than ophthalmoplegic migraine. She was dazed, and as she speaks of it now she has no remembrance of leaving my waiting room and of the first few days at the hospital where she remained a month.

I saw her recently at my office, and her vision with correction is 5/4 in the left eye, and 5/20 in the right eye. The hemorrhage in the right eye was in the macular region. She has a hyperphoria of 1½ degrees and is quite comfortable with a 1-degree prism. The headaches have been fewer and much less severe since this attack. The diagnosis remained ophthalmoplegic migraine.

LOUIS H. CLERF, M.D. (Philadelphia, Pa.): Dr. Bishop's case of laryngeal vertigo was interesting, and recalls a patient we had an opportunity to observe, a physician about 28 years of age who, apparently in good health, suddenly developed curious attacks in which, without any warning, he suddenly found it difficult to draw air into his lungs. He became slowly worse, and in a few seconds he would emit a crowing sound. The first few times he fell to the floor; after that he would sit down or grasp a supporting object, and after a few seconds everything would clear up. The attacks lasted about a minute. He did not become cyanotic. After about three weeks he became perfectly well, and has had no difficulty since. That was about five years ago. We did find that his larynx was badly inflamed, and that he had been working hard and worrying a great deal.

THOMAS R. CURRIE, M.D. (Philadelphia, Pa.): I should be inclined to think that Dr. Bishop's case was one of epilepsy with a laryngeal aura. Frequently, of course, aura precedes epilepsy, and may affect a number of different organs.

I should also think that Dr. Jackson's case might be one of hysteria, because no physical abnormality was found. The symptoms were all functional and cleared up perfectly.

CONFUSION IN NAMES OF DRUGS*

JOHN R. MINEHART, PHAR.D., M.D.
PHILADELPHIA, PA.

It is a serious question where much of our present-day materia medica is leading. Recently one of those high-power professional service men (classic name for drug salesmen) who entered my office stated that his business was to shoot to pieces in five minutes all of the materia medica and therapeutics that it took the medical schools four years to instill into the minds of the students.

Diethylbarbituric acid has children born every day. There is no race suicide in the family of the drug *ma huang*, as well as innumerable others. These offspring are parked on the bleachers of the apothecary's shelves, and if read in rhythmic order, they would sound like the Chinese national hymn. It appears that one pharmaceutical house is trying to outdistance another in creating agents which come in small and expensive packages—not so much in the interest of humanity but from a commercial standpoint.

Recently I was amazed, on reviewing one of the late publications dealing with new remedies, to note that the failure to cross the *t* or dot the *i* may mean the difference between a laxative and a germicide, etc. This has led to a great deal of confusion in prescriptions. To be specific: Recently I ordered a package of *aprotine*, instructing the patient to prepare the food according to the formula found on the container. This patient received a package of *apioline* globules (Chapoteaut). Do not *aprotine*, *apioline*, and *atropine* sound confusing?

A physician wrote a prescription for *agarol*, writing directions and also advising the patient to take a tablespoonful night and morning. This wise Scotch patient asked for a bottle of *argyrol*. When inquiry was made as to the strength, the reply was "the usual," as it was to be taken night and morning. Yet the druggist has been criticized for making certain inquiries and it has been said that he should dispense what is called for!

*Read before the Pennsylvania Pharmaceutical Society at Bedford Springs, Pa., June, 1929.

In another case *metaphen* was ordered for the treatment of trench mouth, and the patient was carefully instructed how to dilute and use it as a mouth wash. *Metatone* was dispensed—a tonic where a potent germicide was desired. I must admit, however, that time should have been taken to write the directions in detail as a guide to the pharmacist.

In none of the above instances do I hold the pharmacist responsible. The difficulty is due to the confusion in names, and often the vague signa, "use as directed," does not enlighten him as to the method of applying the remedy. Those who christen these remedies in the pharmaceutical houses are primarily responsible. When the similarity in names and the poor writing of many physicians is considered, is it any wonder that the pharmacist is in a dilemma?

Apropos of this, I am reminded of two physicians who were trying to read a codicil to the will of a deceased member. One, while using a hand lens to decipher certain words, remarked: "Doctor, do you know that after a physician practices five years, you cannot read his writing?" To which the other replied: "Yes, and after he has practiced ten years he is unable to write at all."

One of the teachers of therapeutics in a well-known medical school recently lectured on "Bunk and Junk." Certainly the time is here for us to get out of the fog into clear sailing with the standard remedial agents of the *United States Pharmacopœia* and the *National Formulary!*

Quinine, which probably ranks second on the therapeutic list, on which the Civil War was won, and which made the habitation of the Panama zone possible during the construction of the canal, has now been sung to sleep with the host of "-ines" coming from the mines. Yes, if you sneeze, use the dial system 4-11-44, and then if you are still alive, give 5-10-55!

If the new-fangled preparation has an early death, the manufacturer states that "it had a great future before it, but the medical profession failed to grasp its value," while, if it lives to an old age on the shelves of the apothecary, "it has missed its calling"!

If the medical world regards this bewildering array of remedies as an advance in medical science, so be it. But God save the patient from the confusion of names!

4821 Germantown Avenue.

Every manufacturing plant should have some form of medical relief available to employees. A large factory should install a dispensary in charge of a trained nurse, who could utilize a part of each day in home visitation looking after absentees.

Meetings of County Medical Societies and Hospital Staffs

The question of county medical societies holding meetings at a hospital has been very freely discussed, and it must be stated that in most instances it would be distinctly advantageous to the county society, for obvious reasons. Whether the meetings should always be held in the one hospital, or alternately in other institutions in the county, is a matter the organization would have to decide. It would appeal to us that the securing of permanent quarters in a hospital, as recently consummated by the Lycoming County Society at the Williamsport Hospital, is worthy of consideration.

Attention has been called time and again to the multiplicity of medical society meetings, and to the necessity for readjustment of compulsory attendance upon hospital staff meetings in relation to their effect on attendance of the stated meetings of the county society. It must always be borne in mind that the county society is the basic unit of organized medicine, and its activities must dominate all medical matters in the county, and any meetings of other medical groups, or any activity of any kind interfering with the attendance at the meetings of the county society should be thoroughly investigated—more especially hospital staff meetings.

California and Western Medicine suggests the value of a summer outing meeting of the hospital staff, or a joint meeting of the staff and the county society through a good-fellowship outing or picnic. One hospital staff had an outing at which the members were signed up for quoits, target shooting, and other games. Each entrant paid a one-dollar fee, and first and second cash prizes were awarded for each event. This particular hospital coöperates by sending along its chef and other help to assure a good out-of-doors luncheon to the almost one hundred members of the staff in attendance. Meeting one another in informal social fashion makes for better social, personal, and professional understanding, and so promotes the interests of organized medicine.

Schools for Negroes

There are only two medical schools for the 10,000,000 negroes in the U. S.—the Howard University Medical School at Washington and Meharry Medical College at Nashville. Each has about 250 students enrolled, and each graduates about 50 yearly. A few good students who can find no room at Howard or Meharry can matriculate at a very few white colleges in northern states. The University of Chicago is the least exclusive. It usually has about 15 negro students. But all the white colleges together have barely 100 negroes on their rolls, and graduate about 25 yearly.

How these 125 negro graduates are to get their hospital experience is a problem which the *Journal of the Association of American Medical Colleges* has called to the profession's attention. There are only seven good negro hospitals in the country and they can accommodate only 50 interns yearly. Practically none of the rest can get posts in general hospitals. So they must get work in dubious private hospitals or sanatoriums or else start practicing unprepared. Their medical inexperience makes patients distrust them. The patients do with home remedies or go to white doctors.

The following solution has been offered to the Association, according to *Time:* Let white medical leaders help negro hospitals improve until they are fit to train interns; let new negro hospitals be developed, particularly in northern negro communities; and make no discrimination between white and negro medical students or interns in schools or hospitals.

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Editorials

CHRISTMAS GREETINGS

The end of another year fast approaches, and we enter into the holiday season. CHRISTMAS! And SANTA CLAUS! We sincerely hope that this mystical, mythical man will bring you the one luminous object of your heart's desire—the one thing you really need.

The Christmas Season should be, and for most people usually is the happiest time of all the year. Family reunions and the exchanging of gifts thrills us. Social life reaches its peak and the festive board groans. So do many of us for transgressing better judgment as to when we have had our fill. We should not only be gay and festive at Christmas time, but all the time. If properly directed it is a mood that induces health and success.

To the physician, Health always is outstanding, and would that we could give the greatest Christmas gift in the world to people, HEALTH!

HEALTH APPEAL

The best available barometer of public sentiment is advertising. The advertising profession, because it depends for its existence upon producing results, is particularly alert to follow the vagaries of the consumer, and may be counted upon to reflect the latest trend of public opinion. The stress now laid upon health appeal, therefore, is doubtless indicative of the prevailing interest of the masses; but, at the same time, it cannot fail to increase this interest by its constant stress on health as something to be greatly desired. Even though the individual advertisement may be of a pernicious nature or though it may offer a fallacious road to health, it cannot help but contribute towards the general development of an ideal of perfect health.

As a matter of fact, all signs point to the popularity of health improvement. In the Victorian era the ideal woman was delicate, pale, repressed, and fainted on the least provocation. Her clothing was a horror and a nightmare—heavy, restricting, and unhealthy. Thick veils and long-sleeved bathing suits were worn to prevent tan. Fresh air, especially at night, was regarded as a menace. The diet was limited, heavy, and overnourishing. Fruits were regarded with more or less suspicion, and vegetables were scarce, especially in winter. Athletics for women was unknown, and among men was confined to the few. The idea of fitness for all throughout life was yet to be born, and a high infant mortality was regarded as inevitable.

Today, women's dress has been greatly reformed as regards healthfulness, whatever may be said about its style, although men's clothing still remains unduly heavy and restricting. Athletics is enjoyed by both sexes and by increasing numbers, and fitness has become almost a religion. The value of sunshine is recognized, and tan is actually fashionable. Infant mortality has been halved, and a healthy mind in a healthy body is the ideal held up for attainment by the average citizen.

As the authorized purveyors of health, these signs of the times are of the greatest interest to physicians. The people are thirsting for knowledge of how to keep well. Too often their intentions are better than their judgment and they are misled by charlatans who are keen to take advantage of the commercial value of health appeal. The old policy of secretiveness which was inherited by the medical profession has perhaps led to a certain distrust by some of the people. The conservatism which is a result of the physician's scientific training is often irritating to progressive lay strivers for health, who are then apt to run amuck among new ideas without much discrimination between the good and the bad. This has led to a certain dislocation of the health leadership of the country. Insurance companies and lay organizations have assumed command without the background of training which would fit them for this position.

It is a time of transition and adaptation to new ideas and ideals, and it provides both the physician's danger and his opportunity. If he rises to the occasion, the prestige of the profession will be greatly augmented; if he fails in adapta-

bility, he can expect demotion to a secondary place in the health affairs of the nation. It is unfortunate that we are always striving to preserve the status quo. There is too much talk of the virtues of the old family physician. He is gone, or at least fast going. *Requiescat in pace!* The conditions out of which he developed have changed. New virtues are now in style. There is a new day to face. New problems are to be solved in a new way. Let us face toward the future instead of the past and forward march!

NEWSPAPER MEDICINE

At first thought it may seem a matter of small moment to medical men whether the general public is informed with regard to the advances of medical science or not, but we believe it is of more consequence than is generally believed by physicians; for the more intelligent people come to know of the splendid achievements of modern medicine and surgery, the less likely it is that they will waste their money on quacks and impostors.

The semiquack method of inviting reporters to medical events for the purpose of exploiting the selfish interests of schools and individuals should receive the severest condemnation from reputable medical men, who, if they would, could act to some purpose through medical societies.

It would seem worthy of the consideration of those in charge of reliable daily papers, of which, fortunately, there still remain a number, that they employ an honorable, conscientious physician to look over the material pertaining to medicine which is submitted for publication, and to furnish occasional news notes and editorials on suitable subjects of general interest.

THE CHRISTMAS SEAL—A NATIONAL INSTITUTION

Again this year, the National Tuberculosis Association will place on sale throughout the country the Christmas seals by which it finances its program of prevention through education. Again members of the medical profession and their families will aid this program by purchasing and using these attractive reminders to "ring out tuberculosis and ring in health."

Christmas 1929 marks the twenty-fifth anniversary of the Association, which was founded in 1904. When it was formed, there was only one other nonofficial health agency of a national character in the entire United States, the American Public Health Association, which was organized in 1872. The latter had no operating program, however, and its energies were devoted largely to the publication of a magazine and the conduct of an annual meeting. Thus the National Tuberculosis Association became the first organized health-promotion agency of a nonofficial character in the country, with a nationwide scope and program, and it has served as a model for many of the other specialized public-health movements.

Laymen as well as physicians were included in its membership from the beginning, and its purpose to help the country both economically and socially in combating the scourge of tuberculosis has been manifested in many more ways than in the chief outwardly seen one, namely the greatly reduced death rate.

For twenty-five years the National Tuberculosis Association has been a leader in organized education of the public in the ways of health. By emphasizing the need for rest, fresh air, food, cleanliness, sanitary living and working places, freedom from fatigue in various occupations, and the need of suitable institutions for incipient and advanced cases of tuberculosis, this Association has made its greatest contribution. It has made the public health-conscious.

In looking back over the twenty-five years, these are some of the actual results they have helped to bring about: In 1904 there were 115 sanatoria in the United States, with an aggregate bed capacity of 9,107. On January 1, 1929, there were 618 tuberculosis hospitals and sanatoria, with a combined capacity of 73,695 beds. There were no tuberculosis dispensaries or clinics in 1904. In 1928 there were 3,671. The first open-air school was established in Providence, Rhode Island, in 1908, and now there are at least 1,000 schools for children from tuberculosis homes or who are substandard in health. There were not more than 10 public-health nurses who devoted a definite part of their time to tuberculosis work twenty-five years ago. Now there are 7,115. There are 83 preventoria for children. In 1904 there were in existence 20 tuberculosis associations, of which number only 8 had money or active programs. Now there is a state association in every state, and there are local associations in the larger cities and counties numbering 1,454.

The Association was founded for the study as well as for the prevention of tuberculosis, and research work has been carried on from the beginning. In 1920 a formal Committee on Medi-

cal Research was organized, and the influence of its coördinated studies and discoveries has already been marked.

These are, briefly, a few of the visible accomplishments of this twenty-five-year-old movement. In supporting its work through buying Christmas seals, the funds of which are used to carry on the campaign, it is well to remember that twenty-five years is a comparatively short time, and that there is much more to be done. There are still over 500,000 living tuberculosis patients in this country. There are far too many being admitted to sanatoria in the late instead of the early stages of the disease. Although we can rejoice that the death rate has been cut in half, yet in the age period from fifteen to forty-five, tuberculosis still takes more lives than any other disease. Here is the prime productive group of our nation, with one out of every five deaths occurring then caused by tuberculosis!

There can be no feeling of self-satisfied complacency on this twenty-fifth birthday. Rather should there be a renewed ambition to go forward. Armed with maturer experience, it will be the aim to reach that goal when tuberculosis shall be reduced to a comparative minimum.

THE CENSOR—THE SUBCONSCIOUS

In mental activity two currents of thought are present, one emanating from the conscious, the other from the subconscious. If the two harmonize, life runs merrily on. If the subconscious is repulsive to the conscious, a conflict ensues. If the censor represses the objectionable current, the conscious stream dominates our thinking, feeling, and acting. In other words, through the vigilance of the censor and the mechanism of repression, unharassed we chase our favorite phantoms. It would appear that the censor and the subconscious mind are the basic foundations on which rest the teachings of the new psychology.

When one attempts a study of this new psychology, he is struck with the difficulty of understanding the so-termed censor. Immediately he asks himself, is it merely a descriptive word for an unseen, unexplainable mental mechanism, or is it to be accepted as a definite entity with tremendous powers? If so, what is it and where is it? Is it dependent on the physiologic activity of the brain cells, or is it to be regarded in the light of metaphysics? Is it what moral teachers have vaguely termed the conscience?

It is most unfortunate that there is not a more definite understanding as to the nature of the censor, for like many other basic keystones of the Freudian school equally as obscure (conflict, sublimation, projection), it must remain in the field of theory or hypothesis until such time as these vital points of the new school are placed on a more definite scientific basis. Are we not justified in referring to the new school as one of the theories of psychologic mechanisms, rather than in accepting it with any degree of finality?

When we turn to the subconscious mind, we find an agency more potent than the censor and greater than even the conscious intellect itself. Presumably its seat is in the midbrain, despite the fact that organists have termed the midbrain the seat of the emotions and have always regarded the frontal lobes of the cerebrum as dealing with the purely intellectual faculties of thinking. Would it not be more to the point to consider the midbrain as the true seat of our emotions, inasmuch as in the evolutionary scale of man's development, feeling (the midbrain) no doubt preceded by ages the faculty of logic and reason, and to regard all faculties of thinking as emanating wholly from the frontal lobe? Of course, the interdependent relationship cannot be denied, but to assume that we have two parallel lines of thought, the conscious and subconscious, with the censor as our emancipator against the evils threatening our welfare seems far fetched.

Furthermore, that thoughts *per se* emanate from the midbrain is a rebuttal of all our previous teachings. On the other hand, that our emotions may dominate our line of thinking seems comprehensible. It is remarkable that although some psychologists refuse to credit the brain cells *per se* with thought, they gladly accept the theory of the censor and subconscious.

Not satisfied with this great power of the subconscious mind, the new school goes further and gives to it the keeping of all our instincts and desires, and linked therein are racial characteristics of the ages—man's experiences as a tadpole, a fish, a quadruped, his early experiences in his present man's life, his desire for achievements, his idealism, and what not. All of which leads us again to repeat that the new school is filled with beautiful expressive language of a theory that is no stronger than its weakest link—the theory of the censor and the great subconscious with its cellars and garrets of preconscious, foreconscious, and thoughts themselves.

In our lay writings and in the writings of those attempting to enter the scientific field, a great play is made of the term subconscious. We find authors, preachers, and teachers guilty of the same practice. All of this is misleading and untruthful, and discredits the teachings of the new school of psychology. As we have said be-

fore, Freud is not responsible for this abuse, but those of his followers who could not resist the call of publicity and personal aggrandizement. It is most unfortunate that the scientific world cannot keep to itself the study and investigation of all its theories, releasing them to an ever-expectant public only when they are confirmed.

Be that as it may, the theory is with us and possibly will continue who knows how long! Perhaps until such time as the simplicity with which it explains mental functioning makes it unpopular and its lack of supportive facts drives us to other fields of investigation of the mind and its mechanism. In the interim, according to its teachings, we are to believe man is no greater, no less, no better, no worse than his powerful subconscious mind and his discriminating censor. Let us seek comfort, however, in the knowledge that psychology is but a branch of philosophy—that science dedicated by Plato to the search for the truth which has as yet not been found.

MISUSE OF THE WORD APOPLEXY

The word *apoplexy* is derived from a Greek root meaning "to strike with violence," and it was originally employed to designate sudden loss of consciousness, with which stertorous breathing, turgidity or cyanosis, and other symptoms often were associated. Sometimes there was sudden loss of power, without derangement of consciousness and the other phenomena. As these conditions were found in many instances to be dependent upon rupture of a cerebral blood vessel, with extravasation of blood into the brain, the word apoplexy came to be used as a synonym for interstitial hemorrhage. As, however, it became evident that the so-called apoplectic symptoms resulted from blocking of cerebral vessels also, either by thrombus or embolus, these conditions also became comprehended in the term. It has been learned further that identical phenomena may develop in connection with chronic nephritis and uremia.

It would appear expedient, therefore, to recast our conception of the word apoplexy if it is deemed necessary to retain it; but as the significance and the usefulness of the word seem to have been lost, we can get along better without it than with it. It is certainly preferable to use the terms cerebral hemorrhage, thrombosis, embolism, or other form of interstitial hemorrhage, or uremia, as the case may be, to indicate the existing condition, rather than to ignore the differentiation by using a term of such vague and uncertain significance as apoplexy, which has been employed to designate a number of unlike conditions.

It is of interest to note, too, how often sudden death is attributed to apoplexy. Our profession should discontinue giving the cause of death as apoplexy when issuing death certificates in cases of sudden demise.

THE DEMAND FOR PERSONAL SERVICE

That "a little knowledge is a dangerous thing" might be changed by the physician to "a little knowledge on the part of the patient is an annoying thing to his doctor." There has been just enough dissemination of medical information among lay people to make them critical of their physicians' methods and not enough to give them an understanding of what is essential and what is not. It has made it more necessary for the physician to be thorough, because the patient of today will not be satisfied with anything less. People, too, have become imbued with the idea that the doctor must *do* something—rub, manipulate, operate, bake, vibrate, radiate, or what not. Seldom are they willing to accept only a prescription and on their way rejoicing go.

Personal service is more in demand than ever before, and the well-equipped medical office must contain a variety of contraptions not included in the *Equipment What's What* of yesterday. And not only must these contraptions be visible—they must be used or the patient feels that he has not had the proper care. The physician must never be too busy to give these personal attentions if he wants to keep the good will of his patients, else the blandishments of the sympathetic cultist across the street may be too much for them to resist and they may suffer in both pocketbook and health.

Verily, the way of the conscientious physician is beset with snares, and it takes the wisdom of several Solomons to lead his patients in the way they should go. But it can be done, though it calls for both tact and knowledge of the popular psychology, as well as sympathy of a high order.

VIVISECTION THAT AROUSES NO PROTEST

It has often been noted that the antivivisectionists are not troubled by the frightful suffering and deaths of animals caused by hunters, pigeon shooters, fishermen, dealers, etc., by poor stables, by cold, exposure, and filth in shipment and slaughtering, and in many similar ways. We wish to add another great class of vivisection practices which seem to have escaped mention and against which, so far as we know, no protest has been raised by the self-appointed friends of animals.

We would not be far wrong if we should place the number of castrations of domestic animals in the entire country at present at a little less than 100,000,000 a year. When one considers that no anesthetic is ever used in these 100,000,000 cases; that the operator is usually without any knowledge of anatomy or antisepsis; that the operation, a "major" one when carried out upon man, is here brutally done and with much unnecessary attendant and consequent suffering; and, lastly, when one compares the tremendous sum total of this suffering with the infinitesimal amount in laboratories—then indeed must one recognize that, as we have before said, it is not suffering but anti-science that stimulates the antivivisectionist. If the societies for the prevention of cruelty to animals were genuinely working for the cause implied in their title, every physician in America would be a member and a helper. Curiously enough, while the S. P. C. A. has done nothing to prevent or alleviate the annual 100,000,000 vivisections to which we refer, veterinary colleges (hated by the antis), by educating veterinary surgeons in scientific methods, are vastly lessening the evil callously ignored by the official sentimentalist.

WHAT IS SCIENCE?

There is no word more abused at the present time than "science." We hear of "scientific salesmanship," "scientific advertising," "scientific office management," and "scientific eating." About the only thing on which the false label of "scientific" has not been tacked is poetry; but we expect daily that its exponent will appear to lead the tyros to Olympus. Can a thing be shown to be "scientific," its acceptance by the crowd is assured. The cult of "Science," indeed, has well nigh become a religion, with its worshippers numbered in multitudes.

For this reason, all the more must the true devotees of science be meticulous in their use of the word and in classification of work as scientific. A clear definition of the term would help to eliminate the inaccurate nomenclature which has grown up around the idea of investigation, analysis, and orderly development.

What is science? There are two methods commonly employed by scientific workers. By the one method there is first of all investigation to determine the facts. These facts are then classified and studied, and from them the general law governing them is deduced and applied. The other method begins with a theory, which leads to investigation to determine its validity. While these methods are applicable to any given aspect of life, it seems trivial to use the term "science" in connection with investigations of every-day and well-understood matters. There is such a vast amount of meaningless research going on at the present time that there seems to be an attempt to glorify the method rather than the substance of science.

Science should concern itself with the great underlying principles of existence, rather than with the familiar experiences of every-day life. To apply the scientific method to living may be desirable; but only when the term "science" is confined to the fundamental, underlying factors will it be accorded the dignity due to its importance.

SIGNS AND SYMBOLS

Man's purposive activity is set in motion by his instincts and desires. The object of this purposive activity resolves itself into a striving and unfulfilled wish, which is later attained and forgotten, or if unfulfilled seeks sublimation in a given symbol. A symbol, therefore, may represent an ideal; in dreams, an unsatisfied sex desire; or in patients suffering from mental disease, it is an indicator as to the situation precipitating the disorder. Thus reads the new psychology.

We are told by some writers that the Freudian theory is not new; that back in the cults of races living years ago there was some sort of belief and interpretation similar to the Freudian theory. When we consider the rôle of symbols in the Freudian teachings, we cannot but observe that old threadbare custom common to all ages of looking for symbols—symbols ranging from those well known to farmers in crop planting to the religious signs of the ancient Hebrews; and it is not necessary to turn to the ancient cults to find a similarity.

There is a difference between scientific deduction and abstract conclusions. Furthermore, we should not confuse literary expressions with scientific facts. In the literary world we are prone to say that a symbol represents an ideal. Man expresses it in marble, stone, poetry, or prose. Man has always looked with reverence, regard, and respect on symbols such as the snake, the totem pole, and graven images. Today we see symbols everywhere—buildings in granite and in marble; art symbolizing beauty; music, rhythm and harmony; and in our religion, beauty and truth. We see it in the home (the child), the library, the schools, and our fraternal orders. Man, himself, decorated in emblems, spats, dress, and attire symbolizing what he desires to be but is not, is but an "evoluted" barbarian. All of this is not a condition definitely

supported by scientific facts, but by abstract deductions, and just why Freud has endeavored to translate such abstract observations into a definite scheme of psychology and call it science is rather difficult to understand.

However, students of conduct and behavior in the course of time will truly evaluate Freud's interpretation of symbols. In the interim, some psychiatrists will attempt Freudian interpretations; but the true psychiatrist will look deeper into the physical and mental make-up of his patient and be not content with a few signs and symbols, for at the present time they are scientifically groundless.

"HUMAN VIVISECTION"

Human vivisection differs from animal vivisection in the one fundamental distinction that whereas the latter (under wise and humane limitations) is permissible for the welfare of the human race and the progress of science, the former is permissible only for the good of the individual himself. The advancement of science cannot outweigh the concern for individual welfare, and the sacrifice of one individual to others must never be sanctioned, except in rare instances, as for example, sometimes in obstetric cases. This seems to us the broad distinction which must obtain between the use of animals and of man in so-called "vivisection" experiments.

It is true that this word "vivisection" is wretchedly misapplied and is given absurd definitions by prejudice and bigotry. But since it will be used, we must apply it to those new operations, tests, and procedures upon the living organism which are as yet of more or less unproved efficacy in the cure of disease or in the elucidation of physiologic and therapeutic truth. So conceived, there can be no escape from the necessity and the advisability of "human vivisection," although the connotation of the words is bad and the distortion of meaning by the antis inevitable. Every new operation, or variant of an old operation, and every advance in clinical therapeutics thus becomes a "vivisection experiment," but it is one based strictly upon the principle of the good of the individual patient, and furthermore upon an intelligent study of the conditions, upon the history of previous similar scientific procedures, and upon conscientious interpretations of the relation of physician and patient. To prohibit any new operations or modifications of older ones which promise better results than have been previously attained is to confine the surgeon to the present admittedly imperfect methods. Witness, for example, the introduction of anesthesia, the new operations upon the head, the abdominal organs, and the lungs, the introduction of cocain and all other new drugs, etc.

By the application of the principle emphasized, the much-talked-of use of the criminal upon whom to try novel procedures not demanded by his disease is ruled out; the use of any one's person, indeed, is absolutely forbidden when the dominant motive is other than a pure desire for his welfare. The question of the consent of the patient or his friends does not seem to us of quite so great importance as it does to many others, because no lay person can have the faintest degree of intelligent understanding of the problem, and his judgment is, of course, valueless. But when the patient's good is the controlling motive the patient's consent is usually unnecessary, although we believe it is well to make the proposal as clear as possible to the patient or his friends. It is, precisely, advice by the informed and skilled to the sufferer uninformed and inexpert which is the essence of every professional relation. In cases of exceptional hazard or of great doubt the conscientious physician or surgeon will always ask the advice of one or more colleagues. But the absolute interdiction of new therapeutic measures and surgical operations would certainly not be in the interest of the patient, of the community, or of humanity.

Let us be frank in condemnation and alert in the prevention of the crimes of those, if there be such, who become as great enemies of science and of the profession as they are of the patient and the community, when they overstep the sacred rights of personality and use individuals as tools for other ends. This use of another as an instrument, and not for his welfare, is the quintessence of all crime and injustice. Let no member of the noblest and most unselfish of all the professions be guilty of a double crime in breaking this law.

MUNICIPAL SANITATION

Municipal sanitation is a subject worthy of the profoundest interest and study on the part of the best medical men in this country. The indifference of municipalities in this respect is astonishing. They wait until pestilence and death have opened their eyes to existing dangers at the expense of great loss of money and often of many lives. After a large fire, when little more than smouldering embers remain to indicate the geographic position of some town, every resident is willing to admit that suitable fire apparatus might have saved their homes, al-

though previously opposed to them on the score of economy. Fire and pestilence are sometimes the best teachers, but the public should not be compelled to wait for such a shock any more than a man needs to become a dyspeptic before he is convinced that he has a stomach. As in most other matters, politics is an acknowledged factor in the municipal health affairs of our American cities. One who has made a study of hygiene and has become noted for his work in sanitation is frequently compelled to make room for another who is an utter novice in this respect. Occasionally a change is made for the better, and a health officer is found with superior knowledge, some independence, and sufficient backbone to adopt and carry out long-needed sanitary improvements. This is abundantly proved by a study of our municipal and State health authorities during recent years.

To prosecute municipal sanitation successfully, four important things should be kept in mind: First, the education and coöperation of the masses in all that pertains to public hygiene, until the laity better appreciate the benefits resulting from a willing and intelligent obedience to nature's laws of how to live and avoid disease; until they better realize that a man does not live to take care of his health that he may live; until they see that without their assistance the efforts of the sanitarian to control contagion and to blot out sickness and the dominant causes of sorrow and suffering are of little avail toward accomplishing permanent improvements. Second, municipal equipment and organization to carry out modern sanitation. Third, strict ordinances, rules, and regulations, the execution of which should be arbitrary, prompt, and impartial. Fourth, laws obtained from the legislature of the State giving plenary powers to the health authorities in matters of municipal sanitation.

THE ANNUAL CONFERENCE OF SECRETARIES OF CONSTITUENT STATE MEDICAL ASSOCIATIONS

The 1929 conference of secretaries of constituent medical associations and editors of state medical journals was held in the auditorium of the American Medical Association building, Chicago, Ill., November 15th and 16th. The meeting was called to order by Dr. Edward B. Heckel, chairman of the Board of Trustees of the A. M. A. Dr. L. B. McBrayer, secretary of the Medical Society of the State of North Carolina, was elected chairman of the meeting. A very enjoyable and profitable time was had, and those in attendance are greatly indebted to their hosts, the Board of Trustees.

The conference presented to Dr. Olin West, secretary and general manager of the A. M. A., a platinum watch, chain, and knife in recognition of his sterling worth, and as an evidence of the esteem in which he is held by them.

The following papers were read:

"The Public Activities Committee of the Nebraska State Medical Association." Dr. E. R. Hays, Falls City, Neb. The author detailed the activities, and laid stress upon the methods of lay education, especially taking advantage of a booth at the State Fair. Here lectures were given on first aid, pamphlets were distributed to those visiting the booth, five thousand being given out the first day, return visits made interesting friends, and physical examinations were made to demonstrate the value of periodic health examinations. A tabulated report was made of the discovered pathologic conditions in people apparently well. Letters were sent to two hundred who had been examined, requesting permission to forward the result of the examination to their attending physician. Of the replies received, 137 accepted the offer. The booth had between fifty and sixty activities (including numerous allied societies, associations, etc.) but all under the control of the State Society.

During the past two years the State Society has adopted a scheme whereby none of the members residing in the city where the annual session is being held appear on the scientific program.

"A State Medical Association Constitution and By-Laws." Dr. George H. Kress, Los Angeles, Calif. This paper detailed the salient features of the constitution and by-laws of the California Medical Association, a copy of which was distributed.

"Why a State Medical Journal?" Dr. J. H. Musser, New Orleans. Dr. Musser considers the state medical journal has a definite place in medical literature; that the manuscript submitted to the journal often is poorly prepared, and much of it has to be more or less entirely rewritten; that bibliographies are useless; that oftentimes state journals are asked to publish papers by authors who fail to find other journals available; that news notes are interesting; that medical society reports are valuable; that editorials should be short, and to the point, covering matters of local interest; that fillers can be used to marked advantage; that book reviews are of value only when written by an experienced reviewer; and that case reports are worth while.

"The Present Status of Industrial Medicine." Dr. Carey P. McCord, Cincinnati, Ohio. The field of industrial medicine is a big endeavor, and too frequently the family doctor is not only not coöperative, but resentful. Broadly speaking, industrial medicine embraces two large fields of related endeavors, industrial hygiene, and cases properly belonging to industrial medicine. Industrial hygiene relates to industrial hazards, this work being done by federal bureaus, insurance companies, etc., instead of by individual doctors. It is another instance of an activity getting away from organized medicine, where it rightfully belongs. Optometrists have made an extensive survey of industrial employees. Dr. McCord found that among 396 clerks wearing glasses prescribed by optometrists, 60 per cent obtained no visual betterment.

Attention was directed to the following classification of medical care in industry: (1) Physician with a practice that includes industrial cases. This is not industrial medicine. (2) Petty industrial emergency hos-

pitals in industrial centers in most cities which depend on the Workmen's Compensation Board for remuneration. They are available and frequently well equipped. The personnel may be good physicians but not good industrial physicians. This is not industrial medicine. (3) Part-time medical service for small plants. These physicians do not ferret out disease, and often may not function to the advantage of any one. (4) Full-time medical services with untrained personnel. This has its advantages and disadvantages. (5) Full-time medical service with trained personnel. This accomplishes far better results. A medical director is most essential. Then again, labor organizations may employ a physician, who is usually to be found around union headquarters. It must be realized by all that industrial medicine is a specialty.

The author particularly urged that organized medicine must accept its subdivision, industrial medicine, as a fixture with the general field of medical endeavor. It should be made creditable, and substantially part of organized medicine. New attitudes should be fostered which will lead to the centralization of industrial medical endeavor within the field of organized medicine, where it rightfully belongs.

"Some Important Problems." Dr. Holman Taylor, Fort Worth, Texas. Reference was made to the management of a state medical society as a whole, and its relation to the public. Funds should be raised not only to pay current indebtedness, but to allow setting aside each year a sinking fund. Advertisements accepted by the state journal should be ethical, and the income therefrom be all that the traffic will bear. The organization, of course, must be governed by a constitution and by-laws. Medical ethics are a hard problem to handle, as they are principles and not laws.

"Descartes Was Right." Dr. Harry M. Hall, Wheeling, W. Va. Dr. Hall prefaced and concluded his paper with the statement. "René Descartes said: 'If ever the human race is raised to its highest practical level intellectually, morally and physically, the science of medicine will perform that service.'" Descartes was a French philosopher born in 1596 and died in 1650.

The purport of the paper is a deep chagrin at our not being the chief controlling factor in the world's affairs. We alone seem to understand the meaning of humanity. In modern drama and present-day literature, it is the medical man when he appears who alone has a great compassion and understanding for all other characters. This is a feverish, ailing world, and on the horizon some great profession must soon appear to cure it of its major ills. Psychiatry appears to have elements in it of such a saving grace. It could easily be our practical religion of the future. Our men do not really appreciate the value of organized medicine.

"Quo Vadis?" Dr. L. B. McBrayer, Southern Pines, N. C. Dr. McBrayer discussed the activities of the Committee on the Cost of Medical Care. In his opinion there is a conspiracy on the part of some rich laymen, possibly aided and abetted by a few physicians, to discredit, to hold up to public scorn, to destroy the well-earned prestige and the confidence of the people in, to humiliate, and no doubt most important to them and the real desideratum, to subjugate the medical profession. The very name of the undertaking, the cost of medical care, immediately and constantly suggests that the cost of medical care is too high, and the blame attaches to the physician. Why not use the term, "The Cost of Illness," or "The Cost of Sickness"? It should be understood by all that the committee in question will include nursing, dentistry, hospitalization, clinics, etc. The laymen who gave $170,000 to the Committee's expenses advise the doctors to organize and advertise. The Committee states they are not responsible for the statement. Dr. McBrayer thinks that Dr. Harris' suggestion of county medical societies organizing medical centers, is the solution to the problem. The doctor must adapt himself to the period in which he is living, and conform to the changes in civilization. Organized medicine can accomplish this.

JOTS AND TITTLES

Research and Discovery

Miss Vera Reader, of the Biochemical Department of Oxford University, has discovered the presence of a third factor, B3, in the vitamin group once considered a unit and designated as vitamin B. It is not resistant to heat.

Katherine Hope Coward and coworkers at the Laboratory of the Pharmaceutical Society in London have reported the isolation of a new vitamin as yet unnamed, but vital to growth in the rat. It is present in fresh milk, lettuce, grass, ox muscle, liver, and wheat embryo.

An Italian entomologist has discovered an order of microbes belonging to the entomococcine class which prey on certain insects, including the malaria mosquito, according to a report from the assistant trade commissioner at Rome to the Department of Commerce.

A study made at Hagerstown, Maryland, by representatives of the U. S. Public Health Service, shows that the incidence of illness increases in proportion to poverty, and that in general, those families which were definitely above the average of this community in economic condition had medical attention to a considerably greater extent than the remainder of the population.

Insufficient blood calcium, according to Dr. Walter Timme, of the Neurological Institute, New York City, is responsible for a nervous disturbance resulting in inordinate fatigability, irritability of temper, and at times even incorrigibility, nonamenability to discipline, and assaultiveness.

According to studies conducted by the U. S. Public Health Service, the evidence thus far adduced indicates that there is endemic in the United States a disease which is clinically indistinguishable from the mild typhus occurring during interepidemic periods in the Old World and in Mexico. The relationship of this disease to typhus is further borne out by serologic similarities. The Weil-Felix reaction is positive. The value of this observation in establishing the relationship of the disease in this country with that of the Old World has been modified by the recent discovery (Kerlee and Spencer, 1929) that the Weil-Felix reaction is positive in Rocky Mountain spotted fever, a disease which, though it belongs to the typhus group, is immunologically distinct. Observations in experimental animals are interpreted as meaning that the endemic typhus of the United States has a common origin with the "tabardillo" of Mexico. The typhus which has been occurring in our eastern seaports does not depend upon direct importation from across the sea. It belongs to the North American Continent. In addition to the peculiarities of the virus, the disease in this country manifests certain epidemiologic characteristics which are in contrast with those generally attributed to the typhus of the Old World. They relate principally to the mode of transmission, and the question has arisen whether a reservoir of the disease may not exist other than in man, a rodent reservoir with accidental transmission to man through the bite of some parasitic blood-sucking insect or arachnid. Such a hypothesis is compatible with the epidemi-

ologic characteristics which have been presented: (1) the uneven focal distribution of the disease; (2) its sporadic occurrence; (3) its apparent lack of direct communicability from an infected person; (4) its association with the place of business rather than with the home, particularly with those premises upon which foodstuffs are handled or stored; (5) the recurrence of cases on the same premises after considerable intervals of time; and (6) its seasonal incidence. Obviously, the rodents upon which suspicion immediately falls are rats and mice, and the parasitic intermediaries which are first suspected are fleas, mites, or possibly ticks. Further investigation is being made.

The Contrary Child

In a lecture on child guidance under the auspices of the Parents' Council of Philadelphia, given at the Central Y. M. C. A., Philadelphia, in October, Dr. Joseph Jastrow, noted psychologist, deplored the undue worry on the part of parents over children sucking their thumbs and showing contrariness. He stated that a child who takes a delight in doing the exact opposite of what is requested of him is in the stage of "negativism," the first stage in learning how to control one's actions. He stated that negativism is produced by the tension which exists between the child's wish to follow his own desires and the immature wish to obey the parent or teacher. It is a state which is eventually outgrown. Dr. Jastrow considers that with sympathetic and intelligent guidance, a better future can be predicted for the children who show extraordinary signs of a lack of control than those more easily controlled. He lamented the fact that the public schools are tremendous agents in teaching children conformity and destroying originality and initiative.

Child Mortality from Accidents

The Bureau of Child Health of the United States Department of Education makes the announcement that 45,000 school children under the age of fifteen are killed in accidents yearly in this country. Startling as this may seem, it almost equals the killed in action in the American Army during the World War. The statement has been made that if deaths of preschool children are taken into consideration, the grand total would amount to a quarter of a million lives yearly. This is a startling array of figures, and is appealing as to the necessity for immediate action. Through constant and intelligent effort for many years there has been a very gratifying decrease in infant mortality in the United States, but this achievement will all be for naught if the frightful mortality is to continue for children after they reach school age. The White House conference summoned by President Hoover undoubtedly will suggest much for the safeguarding of young lives. While it is a national problem, any suggestions, to be effective, will presuppose the coöperation of local agencies in all parts of the country.

A Central Bureau for the Study of Tumors

A "tumor registry" for Philadelphia has been established at the Lankenau Hospital. Credit is due to Dr. George M. Dorrance who agreed to finance the enterprise at its beginning, and to Dr. Stanley P. Reiman who provided a suitable place in which to house it.

The idea originated in the mind of Dr. Joseph McFarland about two years ago, as the result of his interest in the microscopy of tumors and the large number of cases in which he was consulted by fellow pathologists and asked for opinions regarding the diagnosis and prognosis of tumor sections. In many cases the matter was easy, and agreement of opinion at once reached. But there were occasional tumors of unusual histologic appearance in which the question of prognosis was rather a matter of guess than of knowledge, because only a few cases had been seen and none followed to its termination. What was needed seemed to be the careful study of a great volume of material. To this end he obtained the kind coöperation of friends, who permitted him to visit their laboratories and examine their material. He found the result so illuminating, he became convinced that it would advance the scientific knowledge of tumors and greatly benefit the pathologists if some means could be devised by which all of the interesting and important tumors, removed in all of the hospitals, in addition to being kept in the laboratories of the various hospitals, could be assembled, in duplicate, at a central "Bureau," where they might be studied by any pathologist desiring to make use of them. Thus, instead of each individual painfully acquiring information by traveling about from place to place, he needs to go to only one place and find all that the city, and perhaps neighboring cities, had provided during a period of many years' collecting. At this same place he might also be able to learn about the patient —how the tumor had first appeared, how it had grown, how it had been treated, and the subsequent course of events.

All this was discussed with many friends—pathologists, surgeons, roentgenologists—at first as a desirability, then as a remote possibility, which finally became a reality.

It was at first feared that it might not escape the ruinous effects of institutional jealousies and entanglements, but they appear to have been successfully overcome by the acceptance of the space offered by the Lankenau Hospital on the second and third floors of the old pathological laboratory building, where it is perfectly free and independent, and where it has begun its work. The fact that no fewer than forty pathologists engaged in working in the laboratories of the Philadelphia hospitals have enrolled themselves as members seems sufficient evidence of its desirability and justification for its organization.

The Bureau, though actually at work, is in its formative stage. Its organization is not yet perfected, nor are all of its policies completely worked out. Here are some of the details of organization: The membership is to be limited to members of the profession who are actually concerned with the study and treatment of tumors: (a) pathologists, (b) surgeons, (c) gynecologists, (d) dermatologists, (e) roentgenologists.

Thus far the invitation has been extended only to the pathologist through whom the material desired for the bureau is to be assembled. As soon as satisfactory arrangements are made with this group, the others will be taken up and invitations and explanations sent to them. The opportunities offered to members are: Any member desiring to study the microscopy of tumors can make arrangements, at times convenient to himself and the Bureau, to study the microscopic slides in its possession. Or, should he desire to compare sections of some rare tumor with others in the Bureau, he may do so. Or, if he desires the opinion of the Bureau with respect to any tumor, he may have it gratuitously. Any member of the Bureau belonging to a hospital in which there is no "follow-up service," or whose own system does not provide for following up his cases, may arrange with the Bureau to have his cases followed up.

Contributions to scientific research: By a coöperative system of confidential exchange of "follow-up" informa-

tion with hospitals and individuals, it is hoped that, in time, the Bureau will come into the possession of enough data to contribute to the solution of three great problems: (1) The part played by inheritance in the occurrence of human tumors. (2) The importance of the microscope in the prognosis of tumors. (3) The relative efficiency of the present methods of treating malignant tumors.

In order to accomplish the fulfilment of some of these hopes and expectations, earnest coöperation of all concerned will be needed. It is hoped that it may be given in the same spirit of mutual helpfulness and scientific interest in which the establishment of the Bureau was begun.

It is the first venture of the kind anywhere in the world and it is interesting to know that a representative of the National Research Council in Washington is now inquiring whether similar bureaus should not be established in all of the large cities, and that a request has come from an interested individual to be permitted to found an auxiliary bureau in a small city near Philadelphia.—*The Weekly Roster and Medical Digest.*

MEDICOLEGAL AND LEGISLATIVE NOTES

Total Disability as Surgeon Because of Injury to Hand not Presumed Continuous Because Established by Former Judgment.—A surgeon insured by an indemnity accident policy was injured by falling on the sidewalk leading from the street to his house. He was carrying a glass jar, which was broken in the fall, and in some manner his right hand and wrist were cut and lacerated, and the median nerve was severed, resulting in serious impairment of the hand. The insurance company paid a weekly indemnity for total disability under the policy for a period of one year after the injury, and thereafter denied further liability. The insured subsequently brought suit on the policy for recovery of accrued indemnity for continuous total disability, and recovered a judgment which the insurance company paid. The insured continued to file proofs of loss at intervals, and the company continued to deny liability. The insured brought a second action for indemnity for accrued disability to date. In this the insured's evidence consisted of the proceedings in the first case, and there was other evidence for both parties of physicians, experts, and others. The federal district court for southern Iowa instructed a verdict for plaintiff for the full amount claimed. The insurance company appealed.

The position taken by the insured was that the disability having been found in the judgment in the first case to be total and continuous up to certain date, the question of disability was settled for all time, unless the insurance company could show to the contrary. In other words, that there was a presumption that a party once suffering total disability for a period of time continues to be totally disabled for all time, and that any one claiming otherwise must prove the change.

The Circuit Court of Appeals, Eighth Circuit, United States Fidelity & Guaranty Co. v. McCarthy, 33 Fed. (2d) 7, holds that the direction of the verdict was error, the question whether the injury to the plaintiff's hand precluded him from performing any substantial part of a surgeon's duties being peculiarly for the jury. The court said that if the record in the former case had been the only evidence in the second suit, a court could not have told the jury that there was a presumption therefrom that the total disability there found would continue to exist over the period litigated in the second suit. "We do not think a presumption should be indulged that a highly educated, intelligent and healthy surgeon by virtue of an injury to his hand such as is here shown could not practice any substantial part of surgery at any time in the future because it has been determined that for some particular period he could not do so. Disability is not entirely a physical matter. Will power and condition of mind enter into it. A person may be disabled today and in a year from now, without any change in the physical condition, not be disabled. A one-handed surgeon may not be able to perform surgery today, and in a year from today may have to overcome to some extent his disability and be able to perform some part of the substantial duties of a surgeon. If appellee's hand remains in the same condition for the years to come, it might be that he could do some surgical work, and it might be he could not. That is a question of fact to be determined for the period for which he seeks to recover indemnity. That his hand remains in the same condition is not conclusive that his disability also continues. Indemnity under the policy was for disability—not for injury to the hand. The question of any presumption is of little importance as a practical matter in this case..... The ultimate fact in the previous suit as to disability was total disability during the period for which indemnity was sought. The ultimate fact here is total disability for an entirely separate and definite period of time. The question was not in issue, and could not have been litigated in the former action. Each case stands upon its own bottom." Judgment for plaintiff was reversed and the case remanded for a new trial.—*Medical Journal and Record.*

Compensation for Miner's Widow.—The man in question was an employee of the Jeddo-Highland Coal Company, who died following an operation for a strangulated hernia. Through the efforts of the United Mine Workers district staff at Hazleton, the State Compensation Board has ruled that the employing company must pay the award, on the assumption that the employee worked so hard that he brought on the strangulation.

Leaving Gauze in Wound Must Be Shown to Be Proximate Cause of Injuries.—The Ohio Court of Appeals holds, Learer v. Lower, 25 Ohio App. 328, 158 N. E. 199, that, in an action against a surgeon for malpractice, claiming that the surgeon failed to remove gauze from the plaintiff's abdomen after an operation, the plaintiff must submit expert proof, or at least proof of legal character, showing that the gauze was the proximate cause of the alleged injuries. Negligence would not be inferred in the absence of competent proof eliminating all other causes which might produce the results complained of. The fact that particles of gauze were found on the exterior of the wound was held insufficient to raise an inference sufficient to take the question of the surgeon's negligence to the jury.—*Medical Journal and Record.*

Appendicitis Not a Permanent Total Disability. In an Illinois workmen's compensation case, the consensus of the medical testimony was that the claimant was suffering from chronic appendicitis. The Illinois Supreme Court, Cameron Coal Co. v. Commission, 326 Ill. 646, 158 N. E. 399, while expressing no opinion as to whether the claimant suffered as the result of an accidental injury received in the course of his employment, held that there was no basis for an award for permanent total disability and a pension for life where there was no evidence that appendicitis is an incurable

disease, and it was not shown that with proper treatment the claimant would be totally and permanently physically incapacitated for the performance of manual labor.—*Medical Journal and Record.*

Reading from Medical Works on Cross-Examination.—Although it is well settled that medical works are not admissible as substantive evidence for the reason that the authors are not under oath nor subject to cross-examination, yet where a physician testifying as an expert bases his opinion, in whole or in part, on such works, he may be questioned on cross-examination as to views differing from his in books which he recognizes as authority, although it may incidentally place the views of the author before the jury. Although there are decisions of courts of high standing to the contrary, the weight of authority is to the effect that where a witness testifies as a medical expert, excerpts from books and publications recognized as authorities by his profession may be read in framing questions on cross-examination asked for the purpose of testing his knowledge and competency, the accuracy of his conclusions, and the weight to be given to his opinions. Even if reading such extracts by the defendant in a malpractice action was improper, the Minnesota Supreme Court holds, Ruud v. Hendrickson, 222 N. W. 304, that it would not constitute reversible error where their correctness was admitted by the plaintiff's expert and there was no evidence to the contrary.—*Medical Journal and Record.*

Failure to Remove Sponge Not Necessarily Breach of Surgeon's Duty.—In a malpractice action it appeared that the defendant performed upon the plaintiff an abdominal surgical operation. It was agreed that he left in the plaintiff's abdominal section a surgical sponge. About a month later he made another incision in the same portion of her body and then discovered the sponge. The complaint alleged that this sponge was the source of the ill health that necessitated the second incision. The defendant denied this, alleging that the badly infected condition of the plaintiff's pelvis, which required the first operation, caused the formation of a secondary abscess, and that the second operation was performed to remove this aftermath condition, and that the sponge was sterile and caused no ill effects.

The Oregon Supreme Court, Rayburn v. Day, 268 Pac. 1002, said: "A greater degree of skill is exacted by the law of the medical practitioner who specializes in any branch of his profession, as, for instance, surgery, than of the physician who engages in general practice."

"When the defendant entered into his undertaking to perform the surgical operation, a contractual relationship arose between himself and the plaintiff; she agreed to pay and he agreed to render professional services. These services included not merely the exercise of skill in the application of the surgeon's knife, but also skill in the use and final removal of all surgical sponges. Not until all of the latter had been properly removed was his undertaking completed. . . . But the defendant's undertaking did not contemplate that he must necessarily be the one who should count the sponges; the welfare of his patient would demand his attention to something which required greater skill than this important but routine task."

The evidence showed that before the defendant had completed the task of closing the incision one of the attendants declared that a sponge was missing; that thereupon the incision was opened, a hurried search was pursued, and a recheck of the sponges was made. The missing sponge was not found, but the result of the recheck, the interchange of observations, and the hurried search seemed to persuade all that none was actually missing. At this point the defendant declared that the time had come when the plaintiff must be resuscitated. It was held that this involved the formation and exercise of a matter of judgment, and an instruction that the defendant would not be liable for an error of judgment in ceasing to explore the plaintiff's body for the missing sponge was not error.

The court said that: "A failure to remove a sponge would not in all instances constitute a breach of the surgeon's duty to use due care; if such was its essential effect, there was no need to take testimony in this case, because the defendant admitted that he left the sponge in the incision." It was therefore held that proposed instructors were properly refused which might have created in the minds of the jurors the conception that the defendant owed an absolute duty to remove all sponges, that a sponge left in the incision constituted a breach of that duty, and that such a breach would render the defendant liable in this, a tort action. Judgment for the defendant was affirmed.

Regulation of Practice of Optometry.—The Pennsylvania Supreme Court holds, Harris v. State Board of Optometrical Examiners, 135 Att. 237, that Pennsylvania Act March 30, 1917, §6, as amended by Act May 13, 1925, providing that "peddling (of glasses) from door to door, . . . establishment of temporary offices . . . practice of optometry . . . outside of, or away from his office or place of business" are forbidden, with power, under certain conditions, to establish branch offices, is a reasonable exercise of the police power by the Legislature, having a direct and reasonable relation to the health of the people.

"The act does not prohibit an optometrist from practicing outside of his office if he uses lawful methods." He cannot practice it by peddling in the streets or from person to person as the itinerant merchant, but if he is called to a home or a hospital he must provide himself with the instruments necessary properly to fit or adapt glasses to the eye. We do not interpret the provision in the act of 1925 as prohibiting such visits.

"An optometrist may not open more than one office unless he has a licensed optometrist in charge of the second office. If it is desired to engage in business on a large scale, and cover different places with his license, he must either make the examination personally with the necessary instruments or have it done in the same way by a registered optometrist. What the act intends to prevent is the indiscriminate opening of offices nominally under the protection of a license, but in reality in charge of one who is not registered."

The act was passed because of the decision in Martin v. Baldy, 249 Pa. 253, where it was held that an optometrist was not a practitioner of medicine within the meaning of the acts relating to that practice.

"Oculists and ophthalmologists belong to a distinct class from optometrists. The first has relation to the practice of medicine and surgery in the treatment of diseases of the eye, and the second to the measurement of—fitting of glasses to—the eye. We think that the distinction is quite generally understood, the one being recognized as a learned profession and the other as an occupation or vocation calling for a degree of mechanical skill and experience." Saunders v. Swan, Tennessee Supreme Court, 292 S. W. 458, holding that the exemption of oculists and ophthalmologists from the provisions of Tennessee Laws 1925, c. 99, regulating the practice of optometrists is applicable to sufficiently distinctive classes.—*Medical Journal and Record.*

Paralysis Following Heat Stroke Held Compensable.—The Pennsylvania Supreme Court, Clemens v. Cornish, 144 Atl. 821, holds that evidence that a claimant under the Workmen's Compensation Act had a heat stroke during the course of her employment, including expert medical testimony that she was paralyzed as the result of a cerebral hemorrhage due to heat stroke, and the experts could find nothing else in her condition or history to account for the paralysis, was sufficient to sustain an award, disability by heat or sun stroke being accounted accidental under the Pennsylvania statute.—*Medical Journal and Record.*

Tuberculosis Lit Up By Fall Held Compensable.—The Pennsylvania Supreme Court holds, Maurer v. South Penn Collieries Co., 144 Atl. 822, that a referee's finding that a Workmen's Compensation claimant had been wholly disabled since December 7, 1926, owing to "a latent condition of tuberculosis" which "was lit up as a result of his fall on February 20, 1925," was sufficient in law to sustain an award in claimant's favor.—*Medical Journal and Record.*

Federal Court Rules on Drug Labels.—A far-reaching decision on the labeling of medicinal preparations, handed down by the U. S. Court of Appeals for the Ninth Circuit, declares that the use on labels of medicinal preparations of language which, when read literally, is not a statement of curative or therapeutic properties, but, owing to attendant circumstances, may be understood as such, brings these labels within the scope of the Federal Food and Drugs Act just as definitely as if direct statements appeared. The lower court dismissed the libel brought by the Food, Drug, and Insecticide Administration of the U. S. Department of Agriculture, on the ground that it failed to allege facts sufficient to show a violation of the law, in that the statements on the labels to which the Government took exception were not therapeutic or curative claims but were merely reports indicating that physicians had obtained favorable results from the use of the nostrum, each "report" being preceded by the statement "We have received many letters from physicians reporting." The Circuit Court of Appeals, however, held that language such as that used would tend to engender a belief on the part of possible buyers that the use of the drugs would afford relief, and that if the drugs are worthless the proprietors cannot escape responsibility by hiding behind the phrase "The doctors say."

Is the Hospital to Blame if a Patient Commits Suicide?—To what extent is the hospital liable when a patient commits suicide?

A case in which the hospital's liability was the subject of court action is discussed in the *Journal of the American Medical Association.*

A patient, suffering from a nervous breakdown, was admitted to the Louisville Neuropathic Sanatorium, Louisville, Ky. Twelve days later he committed suicide. His widow sued the sanatorium and its chief medical officer for negligence in not giving the patient the watchful attention he should have had, saying that when he was admitted the sanatorium knew that the malady he had might be expected to lead to suicide. The sanatorium answered by stating that when the patient entered, the chief medical officer had asked the son if a special nurse was desired and the son had said, "No." The circuit court gave judgment to the defendants.

The case was carried to the court of appeals, which reversed the decision of the lower court. It pointed out that knowledge of the patient's condition after he entered the hospital imposed upon the institution the duty of using reasonable care to prevent the suicide. Whether the son wanted a special nurse or not did not relieve the defendants of liability in event they subsequently learned or should have learned that the condition of the patient was such that he might commit suicide.—*Modern Hospital.*

What New York State is Doing in the Cancer Problem.—Through Chapter 128, Laws of 1911, New York State created in the city of Buffalo an institution to be known as the State Institute for the Study of Malignant Diseases. The management and control of the institution was vested in a board of trustees of seven members one of whom is the state commissioner of health, ex-officio. The purpose of the institution is "to conduct investigations into the cause, nature, mortality rate, treatment, prevention, and cure of cancer and allied diseases." The institution is authorized "to receive in its hospital for study, experimental or other treatment, cases of cancer and allied diseases free of charge." An appropriation of $65,000 was made for the construction and equipment of a state hospital for research purposes. Provision was made for the publication of the results of the research work.

Through Chapter 48, Laws of 1927, the management and control of this Institute was transferred to the State Department of Health and an appropriation of $120,000 was made for the work. A report of the 1928 activities of the Institute was recently published.

In the education of the public the State Department of Health issues a pamphlet on cancer for general free distribution.—*Health News.*

Negligence Claimed in Injection for Syphilis.—The plaintiff, a man 47 years of age, called upon the defendant, giving a history of angina pectoris, and said he had had a chancre when 20 years of age. The doctor diagnosed his heart condition as due to syphilis. A blood test had shown a four-plus Wassermann. The defendant doctor also had electrocardiographic, polygraphic, and x-ray studies made of the plaintiff's heart. After this, the doctor recommended a course of twelve injections of neosalvarsan and salvarsan in graded doses, followed by twelve injections of mercury. The plaintiff agreed to this form of treatment and it was administered at varying intervals. During this time the plaintiff told the doctor that he felt greatly benefited by this treatment and was beginning to feel well after three years of intense suffering. After several weeks the patient complained of sore throat, and the doctor, after examination, gave him an injection of one cubic centimeter of oxycyanate of mercury and advised him to return home and go to bed, at the same time suggesting suitable treatment for plaintiff's throat condition. The family telephoned the following day that the patient's neck was considerably swollen, and the doctor visited him and found him suffering with a severe sore throat. The doctor took a throat culture and it was reported negative for diphtheria by the health department. The doctor diagnosed the condition as a severe streptococcus sore throat, and advised consultation with a throat specialist. In consultation, it was agreed that plaintiff was suffering from a severe sore throat with edema, probably syphilitic in origin. The defendant also procured a nurse to care for plaintiff, and as he lived a considerable distance from defendant's office, the latter arranged with the plaintiff's family physician to care for patient until his throat condition cleared up, when the defendant intended to continue with the antisyphilitic treatment. The defend-

ant kept in touch with the family and family physician and was advised that the patient was improving.

Some time later the plaintiff's daughter called to see the defendant and demanded the money refunded which her father had paid for his treatment. This the defendant refused to do, and the daughter stated the doctor's treatment was responsible for the father's throat condition, and if the money was not refunded the plaintiff would sue the doctor. Shortly after, an action was begun in which it was claimed that the defendant improperly injected a serum into the plaintiff's arm, causing patient to become ill. The case came to trial, and at the close of plaintiff's case the court, upon motion of defendant's counsel, dismissed the complaint upon the merits, thereby terminating the action in the doctor's favor.—*New York State Journal of Medicine*, xxix, 166.

Cause of Action Against Chiropractor for Malpractice Held Barred by New York Two-Year Statute of Limitations.—In an action in tort against chiropractors for malpractice, the defendants moved to dismiss the complaint on the ground that the New York Statute of Limitations had barred the plaintiff's cause of action. The New York Supreme Court, Special Term, Albany County, Monohan v. Devinny, 225 N. Y. Supp. 601, said that if the action had been brought against a regularly licensed physician, the statute would have unquestionably applied. Civil Practice Act, § 50, subd. 1.

"The practice of medicine is defined by the statute as follows: A person practices medicine, within the language of this article, except as hereinafter stated, who holds himself out as being able to diagnose, treat, operate, or prescribe for any human disease, pain, injury, deformity or physical condition, and who shall either offer or undertake, by any means or method, to diagnose, treat, operate, or prescribe for any human disease, pain, injury, deformity, or physical condition. Public Health Law, § 160, subd. 7.

"A chiropractor, who is not licensed to practice medicine in this state, is unlawfully practicing medicine when he diagnoses ailments of the human body and treats the same."

The plaintiff claimed that a chiropractor, having no professional standing under the laws of the State of New York, could not claim the protection of the two-year statute of limitations. The court said:

"The term malpractice is not defined in the statute. In so far as the term 'malpractice' has been used in relation to the medical profession, it has been applied, not only to duly licensed physicians and surgeons, but to irregular practitioners as well, and also to nurses, midwives, and apothecaries. It signifies bad practices, either through lack of skill, or neglect to apply it, if possessed. The term 'malpractice' has also been applied by the courts, not only to regularly licensed physicians and surgeons, but to others who have held themselves out, professionally, as being able to treat the human body and cure disease thereof."

The court held that a chiropractor in New York State offering to treat a patient must meet the professional standards of skill and care prevailing among those who offer treatment lawfully, and is liable for injury resulting from failure to meet these standards.

"The law," the court said, "does not impose a duty on the most skillful practitioner of medicine to effect a cure, nor have the courts or the Legislature ever attempted to standardize methods of treatment. The most that has been done in this direction is to prescribe certain educational requirements, evidenced by a certificate, preliminary to practice. The failure to possess a certificate is not, at common law, evidence of incompetence, and, even under the statute recently enacted [Public Health Law, § 174, as amended by laws 1926, c. 834], the lack of a certificate is simply presumptive evidence of a lack of skill. It is not *per se* malpractice to undertake to treat disease without a certificate. Brown v. Shyre, 242 N. Y. 176.

"In view of the present state of the law as it relates to malpractice, I am of the opinion that the two-year statute of limitations applies to irregular as well as to regular practitioners, in the absence of express legislative declaration to the contrary."

The complaint was dismissed.—*Medical Journal and Record.*

Governmental Action Improves Antiseptics.—Through the investigations of the officials of the Food, Drug and Insecticide Administration, United States Department of Agriculture, much more dependence may now be placed on antiseptics for human and animal use than was the case two years ago. More than one thousand products described by their makers as antiseptics have been investigated, with bacteriologic tests made for most of them. Mouth washes, douche powders, suppositories, salves, liniments, dusting powders, tooth pastes, and soaps were included among these preparations. Few of these had ever been tested by the manufacturers, and many were found to bear false claims. Most of the manufacturers were willing and prompt about changing their labels or their formulas in order to justify the claims made by them. Some removed their preparations from the market, and in only twenty cases was it necessary to resort to legal action to secure compliance with the act.

HOSPITAL ACTIVITIES

The Relation of the Intern to the Hospital

The applicant for an internship, having accepted the appointment, assumes a moral obligation, and should abide by his decision. Most hospitals require that he shall sign an agreement of acceptance.

Each year a varying percentage of applicants, even after signing up, repudiate their agreement, and accept an appointment elsewhere. This action as a rule places the hospital in an embarrassing situation, as it may not succeed in filling the vacancy. The question naturally arises, should a hospital appoint as an intern an applicant who has signed an agreement to serve elsewhere? In a general way it should not, unless the applicant is duly released.

Having entered upon his duties, he should give the hospital the best that is in him. He should realize that he is an officer of the institution, and as such, must uphold its administration. He should have the consciousness of his duties, and remember that the patient is always the first consideration.

An intern should bear in mind that he was not appointed to reform the institution nor reorganize the administration. He should assume his duties with dignity and decorum, and attend strictly to his own affairs, bearing in mind that the hospital was managed previous to his appointment, and will continue to exist after his departure.

Patients should be treated as human beings, and not as cases, and all should receive the best of attention irrespective of race or creed, or whether in the public wards or in private rooms.

The intern should observe the rules regarding meals. He should be on time for breakfast, and report for duty on the floors at the prescribed time. He should retire in due time to afford as much sleep as possible, that he will be prepared for the following day's work.

If an intern is married, he should not presume on this social status to absent himself from the hospital oftener than time off allowed the unmarried intern. It penalizes the bachelor. This situation anent the married intern has become so acute in some communities that certain hospitals will not consider married applicants for internship.

Philadelphia Hospital Survey.—Mass purchasing, coördination and centralization of effort, and other methods pursued by business were suggested by Philip H. Gadsden, president of the Chamber of Commerce, as a means of increasing the efficiency of Philadelphia hospitals. Mr. Gadsden spoke at the annual meeting of the Pennsylvania Homeopathic Medical Society, held in Philadelphia in September.

Likening the hospitals to big business, Mr. Gadsden said business men are intensely interested in trying to help the institutions solve their problems. His remarks were a résumé of information gained by the hospital survey of the Chamber of Commerce. He spoke of the formation of a hospital council to coördinate effort, with a centralized purchasing agency for mass purchase, as one plan the business men will introduce to make hospitals more efficient.

Pointing out that only sixty-seven per cent of the beds in the Philadelphia hospitals are in use, he said: "We business men say to you, we demand efficiency. We want the Philadelphia hospitals to come closer to efficiency before we contribute any more money for more buildings. Stop building new hospitals until you can adequately use existing ones.

"The question of disease prevention is an outstanding problem in any community. I am told that the average working man loses two per cent, or seven days a year, from illness. Think what an enormous loss this is to industry and commerce, and what a saving it would be if we could keep our men strong, healthy, and well. Therefore, we business men are intensely interested in trying to help you. There are seventy hospitals in Philadelphia, with a yearly upkeep costing $16,000,000. The hospital survey of the Chamber of Commerce will show an average use of only sixty-seven per cent of the beds in Philadelphia hospitals. This is inefficient. It ought to be eighty per cent. Yet drives are in force or contemplated for $15,000,000 to be spent on hospitals here, or on new hospitals.

"The Chamber of Commerce reports will suggest formation of a hospital council composed of two representatives from each hospital in the city—the superintendent and a member of the board. I think there should also be a member at large, not directly connected with any hospital. We are now organizing this council. It will probably have an executive committee, consisting of five superintendents, five board members, and five citizens at large, whose duty it shall be to harmonize the best practices of all the hospitals of Philadelphia. The council will coördinate efforts and standardize accounts. As the years go by, it is our hope that this council will command the confidence and support of the people of Philadelphia, so, when a project is brought forward to build or enlarge a hospital, it will first be submitted to the council, and if endorsed, it will go through and the appeal for funds made. But, if it is not endorsed, it will end there. I hope this hospital council will bring about greater coöperation between the hospitals and work out a centralized purchasing system. The hospitals of Philadelphia purchase three to four million dollars worth of materials a year. Scientific mass purchase through a central agency will save a minimum of fifteen per cent, or $450,000 a year, which is now wasted through want of coöperation and efficiency."

The result of this survey is of intense economic interest, and the deductions based on the end result, with the recommendations made, would be worthy of constructive consideration by any other community.

How Can the Failure of the Nurse or Intern to Perform Necessary Duties Be Brought to the Attention of the Authorities?—In most institutions there exists a false feeling of group loyalty on the part of the members of the nursing and intern staffs. For an intern to report a nurse is looked upon as an ethical crime, and for a nurse to allow her knowledge of an apparent dereliction on the part of the physician to reach the ears of her supervisory officers is condemned. Such a situation is not surprising, and has its counterpart in grammar-school days in the attitude of the pupils toward their teacher. Its presence, however, makes the work of the superintendent of nurses and the administrator of the hospital more difficult. Nevertheless, administrative officers should not court talebearing on the part of any one, nor should they allow themselves to be tempted into playing the part of a spy to gain information in regard to the observance or lack of it of hospital rules.

On the other hand, if young men and women could be brought to understand that failure to perform their duties reacts quickly and definitely upon the welfare of their patients, they would be more likely to do all in their power to prevent others from neglecting any phase of the patient's care. When an intern orders the administration of a certain drug and when a nurse is tardy in carrying out his request, he is not performing his duty unless, after he has fruitlessly tried to correct the defect himself, he informs some one in authority that his patient is not being properly treated. When a nurse observes on the part of an intern what appears to her to be a disregard of duty that may harm the patient she is being untrue to her charge if she remains silent. Frequent conferences between the nursing and the intern staffs are useful. The elimination of personalities and the submergence of selfish interests in consideration of the welfare of patients offer proper solutions to this problem.—*Modern Hospital.*

A Staff Duty.—The private-room department of the hospital when well filled is the source of much gratification to the superintendent and of not a little income to the hospital. Unoccupied rooms, on the other hand, are productive of sleepless nights to the superintendents and of disturbing deficits. Yet the hospital does not have at hand any efficient ethical way of increasing the use of these facilities.

In the last analysis, staff physicians are the logical salesmen of the hospital's private accommodations. It is usually the doctor who suggests the advisability of hospital treatment and who, in a degree at least, determines the type of room the patient is to occupy. If the physician is alert to the best interests of the hospital and of his patient he will inform himself relative to hospital room rates and accessory charges for laboratory, x-ray, and other diagnostic or therapeutic services. Too often unnecessary and unfair criticism is directed at the hospital by disgruntled patrons who

are disagreeably surprised at the size of their bills and who should have been informed by their physician prior to admission relative to room rates and other hospital charges.

The board of trustees of a hospital is perfectly justified in looking to staff members to maintain a high percentage of occupancy in the private department. The time is fast approaching when the collector of staff positions must be required to relinquish those that he cannot properly fill and asked to center his professional attention on but one or two at the most.

That there is no standard of practical support which the hospital should require from the staff physician is to be regretted. It has been said, however, that during the term of duty of a physician and surgeon, the major portion of his private work should be sent to the hospital where he is serving. Even this is but an ineffectual attempt to measure staff responsibility from the economic aspect. Other factors enter into the problem, but cannot be discussed here.

To furnish good hospital ward and room facilities is the plain duty of a board of trustees. To require that staff physicians use them for the treatment of their patients is just as certainly both a right and an obligation on the part of the board.—*Modern Hospital.*

Compensation for Accident Cases Through Legislation.—C. E. Ford, of Albany, chairman of the Legislative Committee of the Hospital Association of New York State, states that "Who is responsible for payment?" is the question frequently asked at the time of admission of an accident case, but such responsibility is often hard to determine, particularly when the patient is far from home and all participants in the accident are dazed by what has occurred. The result is that patients are admitted, receive treatment, sometimes for an extended period, and depart, referring the hospital for payment to the person or corporation alleged to have caused the injury. In few states, if any, does the hospital enjoy a preferential status in the collection of its accounts. After more or less effective effort to obtain payment has been made, the account is likely to be charged off as uncollectible. Losses of this kind, while serious enough in large city institutions, are ruinous for the rural hospitals.

With this in mind, the legislative committee of the Hospital Association of New York State decided to try to meet the problem by supporting two bills. One of these amended the Lien Law by giving hospitals a lien for the amount of a reasonable hospital bill on any compensation obtained by injured persons who received care and treatment in the hospitals. Cases covered by the Workmen's Compensation Law were not included in this amendment. It further required that any one bringing an injured person to a hospital should disclose essential facts, if they were known, such as the name and address of the person causing the injury. Having these facts, the hospital must file, within ten days, notice of a claim that would be a lien on compensation obtained by the injured person.

At the hearing conducted by the joint legislative committee of the Senate and Assembly, representatives of the several large corporations, while expressing sympathy with the hospitals in their difficulties, vigorously opposed the bill. Under the provisions of the bill, they said, no settlement of claims with hospital cases could be made until the amount of the hospital bill was ascertained, which ordinarily would be only after the discharge of the patient following treatment.

In the opinion of the legislative committee such delay would frequently benefit the patient in that he would have time and opportunity to obtain disinterested advice as to the amount of compensation to which he is entitled. The strength of the opposition, however, was such that the bill was never reported out of committee. A prominent member of the legislature suggested that the opposition would be less to giving hospitals liens on damages obtained as a result of a judgment of a court, since the settlement of such cases is necessarily delayed by suit at law. While such a limited lien by no means would meet the situation, it would be helpful to hospitals and would mark the acceptance of a principle, details of which could be changed and the extent of coverage increased by later amendment.

When it is impossible to obtain payment for an injured patient from those concerned in the accident, the burden of support should be distributed over the entire community by making the patient a public charge maintained by money raised by taxation. The second bill supported by the Association was therefore intended to make provision for the payment of public funds in the care of such cases. The settlement laws of New York are not so vigorous as those of some other states, but still the required residence of one year is sufficient to cause public officials to disclaim responsibility for many emergency cases admitted to hospitals. To meet this situation it was proposed to extend to the cities the authority now conferred on counties to make payments to charitable institutions, including hospitals, for persons temporarily or permanently within the community —that is, without reference to the facts of settlement. Under this plan some counties have made appropriations to assist hospitals and other institutions in meeting necessary deficits, an arrangement which seems to have benefited these organizations.

In considering this bill, opposition was expressed by certain organizations and by some cities that were fearful they would be called upon to make large appropriations. The measure as finally passed applied only to Buffalo, which favored the law. Following this action by the second city of the State, favorable action by other localities is looked for.

While the Association did not obtain all that it sought, the experience indicates that it may be possible to secure through legislation the following results for the benefit of hospitals: (1) Changes in the law of liens to give hospitals in accident cases a lien on any "insurance or other fund or benefit which may be paid on account of the accident." (2) Such allowance of public funds as shall compensate hospitals for losses necessarily incurred in the treatment of accident cases, resident or nonresident, thereby distributing over the entire community the burden of caring for such cases.—*Modern Hospital.*

To What Extent May Staff Physicians Order New and Nonofficial Remedies?—The purchase of drugs entails the outlay of a considerable proportion of the hospital's total expenditure. If only standard drugs and preparations recognized by the *United States Pharmacopeia* are purchased, the expense is of large proportions. But when proprietary or semiproprietary preparations are permitted to be purchased, the financial burden becomes proportionately greater. Many efforts have been made by hospital executives to control the type and extent of drugs purchased. In some, prescriptions of staff members are kept in stock, and to these are assigned a number or numeral by which they may be designated on the patient's chart. Interns and staff members are rigorously restricted with regard to ordering these preparations. In such institutions, only the most urgent biologic drugs are permitted. Usually

money may be saved, but objections arise to such a system when it is rigorously enforced. Such a standardization, to be wholly successful, presupposes the possibility of just as accurately standardizing the conditions the drugs are prescribed to relieve. This of course is impossible. Yet the administrator who endeavors to restrict the purchase of new and nonofficial remedies that possess a proprietary taint often meets the objection that staff members cannot cure patients unless they are given implements with which to work.

Nevertheless, he must not cease his efforts because objections arise. There should certainly be some visé of prescriptions which call for expensive drugs, coming from the hospital wards. The druggist should not be given full power to purchase proprietary preparations that are not recognized by the Council on Pharmacy and Chemistry of the American Medical Association. This practice should be frowned upon and the prescription of standard pharmacopeial drugs encouraged. Nonofficial but useful remedies, approved by the abovementioned Council on Pharmacy and Chemistry, should be permitted. Even in the private rooms where patients are willing to pay for the drugs used, the employment of proprietary drugs should be discouraged. If the exemplification of the highest principles of medical ethics is not to be found in the hospital, it will be difficult indeed to implant these practices elsewhere. When inordinately expensive drugs are ordered, an interview between the physician who originated the request and the person upon whose responsibility they are to be bought is often fruitful in solving this difficulty.—*Modern Hospital.*

When an Intern Serves Two or More Chiefs, Which has Priority if They Should Wish to Make Rounds at the Same Time?—In the intern schedule of most hospitals it is necessary for the same intern to serve the patients assigned to more than one chief. This system results in a situation that is irritating to the chief who cannot understand why his rights are not being protected when he cannot see his intern. It is also disturbing to the intern, who is blamed for a situation over which he has no control.

It is sometimes possible for the hospital administrator, in planning the intern schedule, to arrange the visits of staff physicians so that they do not coincide. This can usually be done after a conference at which the visiting physicians concerned are in attendance. If the matter is fully and frankly explained as to the necessity for assigning the same intern to two or more services, less friction will be likely to arise than if the physician is allowed to learn, purely by chance, the reasons for the intern's absence.

When it is impossible for staff physicians to alter their accustomed routine so that their hospital visits do not conflict, good sportsmanship frequently prompts the casting of lots, or in some other amicable way bringing about the acceptance of a less favorable hour by one of the physicians.

It is sometimes a good scheme to list staff members according to their seniority. When this is done, matters of individual preference as to time of service, hours of visiting, priority as to intern's attendance, as well as the scheduling of operations are rather easily settled by allotting to the senior physician such privileges and advantages as his long term of service warrants. If it should happen that the two physicians concerned are of equal rank from the standpoint of service, then the decision may be made by the tossing of a coin by the superintendent himself.

It is the duty of the hospital executive, moreover, to protect the standing of the intern with his chief. It is not fair for the intern to be blamed for an absence or inattention of which he is not guilty.

It is usually the custom for operating-room calls to take precedence over house rounds when applied to the presence of the intern.

Sometimes local institutional rules aid in solving this problem. The superintendent's judgment, however, as to the adoption of a scheme that will bring about the greatest good to the greatest number, should be the final consideration in the solution of this difficulty.—*Modern Hospital.*

The Patient Considered From an Individualistic Viewpoint.—What is a patient? Frankly, I know of no single definition that will satisfy the hospital administrator, the doctor, the relatives of a sick person, and the individual himself. For the hospital administrator, the patient is an actual or prospective inmate of the institution; for the doctor, he is a caller at his office or one whom the physician himself is called to visit; for the relative, the definition of a patient varies with the qualitative and quantitative standards of human sympathy, human solicitude, human love; for the sick person himself, he becomes a patient through a complex of psychologic, sociologic, and personal reactions. We generally define a patient as a sufferer from a disease, but this definition does not help us in determining the answer to our question. Suffering is an extremely elastic term; disease is no less elastic. The terms of our definitions are just as vague as the idea we attempt to define.

Arbitrarily we attempt to classify patients. From the physician's and the hospital's viewpoints there are ambulatory and nonambulatory patients. These terms, however, do not in any sense measure what we may call "patienthood," the condition in the individual that affects a suffering human being. Many ambulatory patients are much more sick than the inmates of our institutions. Many an ambulatory patient is closer to a crisis in his disease, closer perhaps to death, than his hospitalized neighbor.

The hospital administrator and physician also classify patients. Such a classification seems less arbitrary. Yet we would probably all agree that there are but few medical cases that may not, under certain circumstances, become surgical cases, and undoubtedly by far the larger percentage of surgical cases are also medical. We have, however, no way of strictly classifying, for example, an ophthalmologic patient because we know definitely that many eye conditions are associated with ear, nose, and throat conditions. We recognize this fact to some extent through our practice of inviting consultations, but the arbitrariness of this procedure is also easily recognized. Within the specialties themselves we classify a case, for example, as pneumonia or typhoid fever, as carcinoma of the breast or sarcoma of the bone. Here again countless differences present themselves. We group our patients according to so-called "clinical entities," but what is a "clinical entity?"

In the midst of these countless paradoxes, do we not lose sight of the fact that the patient, after all, is still a human being? Temperament, character, constitution, remain the same whether a man goes about his business in office or factory or whether he lies prostrate upon a hospital bed. He has the same claims, the same rights, the same needs, the same yearnings, whether he walks about the street or whether he is immured in the ward of one of our institutions. Records from this point of view, histories, progress notes, bedside notes, labora-

tory reports, and reports of end results gain a deeper significance when we have caught the thought that the patient in whom we are interested is the only one of his kind and that an individual answer must be given to the problem this patient has brought into our hospitals. —ALPHONSE M. SCHWITALLA, Dean, St. Louis University School of Medicine, St. Louis, in *Modern Hospital.*

INDUSTRIAL MEDICINE

Amendments to the Workmen's Compensation Law of Pennsylvania.—Three important amendments to the Workmen's Compensation Law were made by the Legislature at its last session and approved by the Governor.

Section 1 of Article 1 of the Compensation Law, which provides that the Act shall apply to all accidents occurring within the Commonwealth irrespective of the place where the contract of hiring was made, renewed, or extended, and shall not apply to an accident occurring outside of the Commonwealth, was amended to read, "except accidents occurring to Pennsylvania employees whose duties require them to go temporarily beyond the territorial limits of the Commonwealth not over ninety days when such employees are performing services for employers whose place of business is within the Commonwealth." This amendment was approved by the Governor on April 29, 1929, and became effective as of that date.

Section 305, which provides that every employer liable under the Act to pay compensation shall insure the payment of compensation in the State Workmen's Insurance Fund, or in any insurance company or mutual association or company authorized to insure such liability in this Commonwealth, unless such employer shall be exempted by the Bureau of Workmen's Compensation from such insurance, and prescribing the procedure to be followed in applying for exemption, was amended to provide that in case any employer fails to comply with the provisions of this Section "such employer shall be guilty of a misdemeanor and upon conviction thereof for every such failure shall be sentenced to pay a fine of not less than one hundred dollars ($100) nor more than five hundred dollars ($500) and costs of prosecution or imprisonment for a period of not more than six months or both at the discretion of the court. Every day's violation shall constitute a separate offense." The Bureau of Workmen's Compensation is charged with the enforcement of this provision of the Act, which was approved by the Governor on April 26, 1929, and became effective on that date.

A portion of Section 307, which provided that upon the remarriage of any widow, other than a nonresident alien widow, she should receive a lump-sum payment of the compensation payable to her during one third of the remainder of the three-hundred-week period, was amended to provide, "that upon the remarriage of any widow, other than a nonresident alien widow, the compensation of such widow shall continue as hereinbefore provided for one third of the period during which compensation then remains payable to her." This amendment was also approved by the Governor on April 26, 1929, and became effective on that date. It means that in case of the remarriage of a widow, she will not be entitled to receive a lump-sum payment, but will receive a compensation in regular installments for one third of the remainder of the three-hundred-week period. In case of minor dependents, who are entitled to compensation benefits, and the widow who has remarried has been paid her allotment it will then be necessary to have a guardian appointed for these minors, either by the Workmen's Compensation Board or the Court. Compensation payments will then be made to the guardian for the benefit of the children until each child reaches the age of sixteen years and is no longer a beneficiary under the Compensation Law.—*Labor and Industry.*

Health Accidents and the General Practitioner.—Dr. C. T. Graham Rogers, discusses this subject in the *Long Island Medical Journal* for August, 1929.

Illnesses attributable to the hazards of industry or to the individual's occupation have been variously described as "occupational diseases," "industrial diseases," "industrial poisoning," "diseases of dangerous trades," 'industrial medicine," "eczema," and "traumatic dermatitis."

Within the meaning of the various compensation acts, disease occurring as a result of occupation must be interpreted as an accident in order that compensation may be legally awarded. The term *accident* has become so commonly associated with trauma and external wounds or surgical conditions due to visible hazards that its intrinsic meaning has been ignored. The existence of health hazards is not denied, and surely the result of exposure to a health hazard may result in a health accident. Is it not obvious that the designation health accident is more applicable?

A lay writer states that physical impairment produced by slow development of a disease that had its origin in the process of an industrial occupation is no less an injury than the disability caused by an accident. Health accidents may be defined as those changes in the human body due to the effects of harmful substances, process of manufacture, or vocation. The words *harmful substances* have been established by the Statistical Bureau of the N. Y. Labor Department in place of the expression *poisonous* or *dangerous substances,* for many such materials, *per se,* are neither dangerous nor poisonous, but under some conditions they become a health hazard.

No discussion of health accidents can be undertaken without including some phase of industrial hygiene, for industrial hygiene is that branch of medical science which relates to the study of industry and the effect of its conduct upon the health and safety of its operatives —all this to the end that normal human life is prolonged, and production increased without hardship or economic loss. Despite the attention directed toward this special branch of medicine, the general practitioner has not become fully awake to its importance.

Death or serious bodily injury occurring as a result of a machinery or an automobile accident is a hazard the average person readily understands, because it is one that can be visualized, and so the profession and laity lend their united efforts to the enactment of safety measures and compensation laws, in other words, proper control. Death or serious illness resulting from a harmful substance, exposure to manufacturing processes, or insanitary conditions, are hazards even many professional and technically trained individuals fail to recognize as a serious menace, thus the general public does not give the hazard marked attention or support the demand for remedial measures or control as they would in the case of hazards resulting in a surgical injury.

The general conception of industrial hygiene by the profession and the laity is that in some way it relates to those who must earn their living by hard manual labor, surrounded by ponderous machines or exposed to poisonous materials; but more especially it refers to wash rooms, toilets, light and air, as well as to the

prevention of illness which might result from exposure to harmful substances used in or produced by industry. This idea may possibly arise from our linking together known expressions, and may well lead to an inaccurate conception of the true import of industrial hygiene and its relation to health accidents. The indirect results accruing from health accidents or exposure to health hazards of industry alone can never be truly estimated until we have a complete and proper control.

The practitioner in agricultural centers may question the value of concerning himself with health accidents. Every agriculturist knows that copper, lead, arsenic, and lime form the greater part of the insecticides used by the grower of crops, and also by the suburban dweller who maintains a garden. The effects of these harmful substances have been recorded. Alkali and phosphates are a content of the fertilizers in use. Dermatitis is not unusual as a result of exposure to these substances. Cyanid and sulphids are recommended and are in use for the destruction of rodents, and the effects of exposure to these substances are well known.

In silos, and in the storage tanks of the cider and vinegar industry, fatalities have occurred in the course of cleaning out these receptacles, due to exposure to the lethal carbon dioxid. Respiratory disorders following exposure to dust created by threshing machines are not uncommon. Can it be denied that there may occur health accidents as differentiated from the general diseases?

It may be doubted that the urban dweller, domestic, or hotel worker may be exposed to hazards or suffer from health accidents. However, modern methods, and processes employed in industry have gradually been introduced into homes and hotels. Cleansing powders and washing materials contain the same harmful substance as do their counterparts used in industry, and nasal, respiratory, and skin affections result from exposure to these materials.

Illuminating gas used for many purposes has been the cause of fatalities and illness. Investigation of a number revealed the fact that a material used to cleanse cooking and table ware contained a cyanid compound, and strange to relate, attention was first directed to the condition by a local health department veterinarian, not by a medical practitioner.

Modern methods of refrigeration have been the means of introducing methyl chlorid, sulphur dioxid, and carbon dioxid under pressure. Exposure to these substances has resulted in serious illness.

It is true that in industry is found the greatest number of hazards, and interest is usually centered on securing compensation for accidents resulting in surgical injuries. Many health accidents also occur, but unfortunately the same interest is not evidenced in this direction as would be desired. Many physcians in general practice are reluctant to treat patients with an illness which may develop into a compensation case. The reason for such objection is probably due to the fact that at some time a patient has come under their care suffering from a health accident, and then after long treatment, when the time came for remuneration, it was found that the case was not one coming within the meaning of the Workmen's Compensation Act, or not a result of the patient's occupation.

Is not the physician himself really at fault, through failure to keep acquainted with the law and the subject of industrial hygiene? Is it small wonder that medicine has become commercialized in this respect? Much help could be given the patient, and disappointment avoided, especially for the physician, if more time were given even to a cursory study of industrial hygiene, or of the harmful action of the substances used in the process of manufacture. Many of these substances are used in medicine, and a description of their action may be found in the materia medica and chemistry works already in the practitioner's library.

It is disappointing that not all health accidents are compensable, but each year through concerted action, aided by reliable statistical data, the list is enlarged. But with each addition we are reminded that compensation is a legal measure as liability insurance. Surely there is more to compensation than the legal aspect! Whether it be a traumatic or a health accident, some principle of industrial hygiene is usually involved.

The hearings on claims for occupational diseases bring out the fact that many general practitioners are not well informed as to the provisions of the compensation law, and there is lack of knowledge of the etiology, symptoms, and prognosis of health accidents, and some are not conversant with the harmful action of many substances used in industry. One feature stands out prominently, and that is the failure on the part of physicians to comply with the section of the N. Y. labor law requiring physicians to report industrial poisonings.

It cannot be doubted that the general practitioner feels it an imposition to be called upon for separate reports to the N. Y. state labor and local health authorities about the same case, and this without some recompense for his labor. Some physicians may be of the opinion that in filling out the physician's report to the compensation bureau they have complied with the law. This is not so, for in many cases this form is filled out only after many months have elapsed following the date of beginning illness. In many cases the form has been completed only after the claimant has come before a referee and the case has been adjourned for the purpose of the claimant having the physician complete the form so that it may be filed. Very often failure to file the form has worked an injustice to the injured worker, as well as to physicians.

It is obvious that were a health accident reported at once, as required by the law, or if possible, that the medical profession secure a departmental ruling in effect that a copy of the compensation form completed at the beginning date of illness be accepted in its stead, it would be productive of beneficial results to the practitioner, the claimant, and the referee. The patient who is injured or suffers from a health accident should be compensated; likewise the physician who cares for the injured or ill worker should receive proper remuneration, but to secure such results the practitioner must be alive to his own interests as well as to those of his patient. In all cases the physician should be in a position to support his patient's claim by competent medical facts. Of most importance is the fact of answering the questions on the form clearly and fully.

In New York State, through the provision of the Labor Law, it is possible effectively to minimize or eliminate the health hazards in many industries, and, through the Industrial Code, provide for medical supervision of persons employed or applying for employment in dangerous industries. The task of securing compensation for health accidents is dependent upon the general practitioner furnishing the accurate statistical data necessary to secure remedial legislation. The physician owes this duty to the patient as well as to himself—and indirectly to the public. It cannot be evaded, it is of economic as well as of medical importance, and this duty cannot be properly performed unless attention and thought be given to health accidents.

PHYSICAL THERAPY

The Unfortunate Promiscuous Use of the Ultraviolet Lamps.—The writer has recently had the experience of examining several patients who had been treated by physicians for contusions and sprains by means of general ultraviolet exposures. Ultraviolet irradiations could benefit such conditions only if used locally in sufficient strength to cause counterirritation, and in none of these cases had such a dose been given.

Ultraviolet light is scarcely indicated in such lesions, even when properly applied, since there are several other physical-therapeutic measures which are much more valuable; namely, diathermy, infra-red therapy, or simple radiant heat. Any of these would be far more effective than ultraviolet light in the treatment of contusions or sprains.

A physician, just because he has equipped himself with an elaborate and rather costly lamp, should not expect the impossible. Such promiscuous use of the lamp is bound to result in failure to obtain good results, and will, in the end, lead to condemnation of a most valuable agent.

Ultraviolet light has so many uses and is such a beneficial method of treatment that one dislikes to see it misused. It is apparently an excellent tonic. It is also serviceable in the treatment of certain skin diseases, and it is used in practically all large skin clinics. Its value in rickets and in "surgical tuberculosis" has been definitely established. But why use it in bruises and sprains?

Physicians would not use elixir of iron, quinin, and strychnin to treat a sprained wrist. Many, however, proceed blandly to turn a quartz or carbon light on the patient in such a manner as to give a tonic dose, expecting that because the lamp is large and causes a reddening of the skin surface it will be of benefit.

The indications for the use of physical therapeutic measures should be just as carefully studied as the indications for the use of drugs. These same careless clinicians will later cry loudly in condemnation of this valuable therapeutic agent, when the present overenthusiasm concerning it has subsided. We feel certain, nevertheless, that this method of treating disease has been definitely established and that ultraviolet light will become a standard equipment in our therapeutic armamentarium.

PUBLIC HEALTH

Conference on Child Health and Protection.—Some five hundred specialists will be marshalled in the service of the President's Planning Committee for the White House Conference on Child Health and Protection, with Dr. Ray Lyman Wilbur as chairman, and Dr. H. E. Barnard of Indianapolis as director. Secretary Wilbur's statement follows:

This Committee, after careful study, outlines its purpose in the utmost simplicity. It is to study what is being done for the child, and report its findings to the conference, as well as to make recommendations as to the future.

The whole problem of child health and protection is divided into four sections. The first of these is medical service, which is to be headed by Dr. Samuel McC. Hamill, of Philadelphia, eminent authority on child health and former president of the American Pediatric Society. His work in turn has been divided into three subsections—one on prenatal and maternal care, one on medical care of children, and one on growth and development. Each of these committees will be made up of a score of specialists selected from the best material in the Nation. Thus is this phase of the problem organized that it may be handled thoroughly and dependably.

The second section of the great study will be that of public-health service and administration. Surgeon General Hugh S. Cumming, head of the Federal Public Health Service, will himself preside over this section. It also has been divided into three subsections. The first of these is public-health organization, the second is communicable disease control, and the third is milk production and control.

Section three is to be devoted to education and training. Thus is it shown that the study is to be much broader than merely one of health as we ordinarily think of it. This section is to be headed by Dr. F. J. Kelly, president of the University of Idaho. His section has been divided into six subsections. They are the family and parent education, the infant and preschool child, the school child, vocational guidance and child labor, recreation and physical education, and special classes.

Section four is to be devoted to the handicapped child, considering prevention, maintenance and protection. At its head is C. C. Carstens, director of the Child Welfare League of America. His work has been divided into four subsections. They are State and local organizations for the handicapped—public and private; a study of the physically and mentally handicapped; a study of delinquency; and of the dependent child.

The chairmen of these sections and subsections and many of the members of the committees already have been chosen. In all, some 500 outstanding authorities will be marshalled for the work. It is believed that they will be at it for a year before they have pulled the situation together and are ready for a report.

All that they do is but preliminary. Their findings are to be presented at the White House conference on child health and protection, which will not meet until the studies have been completed. The findings are intended to set up the picture of what has been done and to point the way to future action to the end that oncoming generations may make their maximum contribution to the citizenship of the Nation.

The Modern Health Crusade in the Catholic schools of Philadelphia was opened in September, when 40,000 school children took the pledge of allegiance to better health. The crusade was conducted under the auspices of Rev. Dr. John J. Bonner, diocesan superintendent of Catholic Schools, and the Philadelphia Health Council and Tuberculosis Committee.

A group of children whose health records last year were exceptionally high will act as aides in the war against bad health. Children whose health records entitle them to the degree of aide de camp in the crusaders' army will be chosen from each school. The children thus chosen will present an example to the others in their schools of the correct performance of the many health chores which must be accomplished before the youngsters can attain the stations of "squires," "knights," and "knight bannerets." The health duties include a list of tasks, such as brushing teeth, sleeping with the windows open, drinking milk, and the scores of other duties which the child must complete if he wishes to become the proud possessor of a badge of one of the degrees of knighthood.

The Modern Health Crusade has been established among the children to teach them in dramatic fashion the value of good health habits. The crusade regalia which each child is entitled to wear and the entire play

idea behind the crusade appeal to the imagination of the youngster and rouse his or her enthusiasm to the highest pitch.

More children than ever before are enrolled in the "Legion of Health" this year. Youngsters from the first to the sixth grade are entitled to seek crusaders' honors, which will be formally awarded in June. Each child individually will seek a high health score in order to attain his own personal degrees in health knighthood, but each school as a unit will also strive to capture one of the twelve silver trophies offered for the best scholastic health record during the year. The pledge of allegiance is "I believe in my country and in the good citizenship of its people. I believe that to support my country I must have health, strength and honor. I love my country's flag. To me its bright red stands for bright red blood, which means energy and power, cheerfulness and hope, human kindness and the joy of living. Its blue stands for the clear sky, the sunshine, fresh air, play and exercise. As an American I will be a faithful soldier in the children's army of peace, the Modern Health Crusade."

The Doctor Should Have Community Interest.—Physicians should not stand aloof from taking active part in public-health affairs of their community and should do all in their power to improve conditions. They should accept appointments to committees and commissions and offer their services in such matters where their knowledge and ability will benefit the community.

When the physicians of a community fail to accept such appointments it may result in some ill-natured individual being invited to take the appointment, which often leads to misadvice, lack of proper professional procedure, and friction with the medical profession.

We as physicians should be wide awake to the latest developments in the prevention of disease. Preventive medicine must be necessarily carried out in a more energetic and positive manner than curative medicine. A well person must have the several measures of preventive medicine brought forcibly to his attention before he will even become interested in the proposition. This the family physician should do. He must do it if he is giving all he can for the health of his patients.

Conference of the National Society for the Prevention of Blindness.—The annual conference of this organization was held November 11-13, 1929, in St. Louis, Mo., with headquarters at Hotel Chase, and in coöperation with the Missouri State Board of Health, State Bureau of Mines, State Department of Labor and Industrial Inspection, Commission for the Blind, Association for the Blind, the St. Louis Public Schools, the American Legion, the Ophthalmic Section of the St. Louis Medical Society, the Missouri Social Hygiene Association, and Sight-Saving Class Supervisors and Teachers. Conferences covered the following general subjects: Coöperative Relationship in the Field of Prevention of Blindness, Conserving Vision in Industry, Social Hygiene in Relation to Prevention of Blindness, Trachoma, Vision Justice for the Young Child, and Sight-Saving Class Opportunities. Luncheon meetings and conferences were held, an Armistice Day banquet, and an open meeting and reception was arranged by the Ophthalmic Section of the St. Louis Medical Society.

Nonreporting of Venereal Diseases in Philadelphia.—Venereal diseases were made reportable in Philadelphia in 1918. Provisions were made for reporting by serial number in private cases and by name and address in institutional and clinic cases. Official records of cases reported were declared private and confidential, not accessible to the public or any person other than the official custodian. Infectious cases, delinquent in treatment, or otherwise constituting a public-health menace, were made reportable and subject to special investigation and disposition. Such cases are reclaimed to treatment at sources of reporting, placarded, and quarantined at home or removed to the Philadelphia General Hospital and there quarantined. Suspected and clandestine cases are investigated and properly disposed of from a public-health standpoint. Every effort is made to identify sources of infection to known cases and, when discovered, same are forthwith placed under immediate control. Home contacts are routinely investigated and examined for evidences of disease.

Introduced as a World War measure, under governmental supervision, the reporting and control of venereal disease came in on a popular wave. Following the return to peace these activities were sustained through the educational propaganda and vice-repressive measures of the Federal Government in coöperation with the states. However, within recent years there has been an apparent slowing-up in these activities. The reporting of cases, involving control, has marked time or been actually diminished all over the country. In Philadelphia it may be conceded that the incidence trend of venereal disease is on the decline, but not to the extent indicated by the reduction in the number of case reports. It has been estimated that about 60 per cent of cases of syphilis and 755 of cases of gonorrhea are under treatment by private physicians. In Philadelphia only 17 per cent of the total number of case reports are received from the private physician. The World War case rate given Philadelphia was 37.3 per 1,000 population, and the nearest approximation to this figure was 2.10 in 1919 and last year (1928) it was 1.44 per 1,000.

It is evident that venereal-disease case reporting in Philadelphia is not popular and certainly does not approximate the incidence of these diseases in a community of two million inhabitants. As in the other communicable diseases, the health officer should be supplied with data on prevalence, geographical distribution, foci of infection, etc., in order intelligently to direct measures for control. Such data can be supplied only by the reporting physician, and there should be no hesitancy on his part or on the part of the patient to comply with the law. The law not only protects the identity of the patient conforming thereto, but, at the same time, protects the innocent public from a potential focus of infection.—*Report of Philadelphia Department of Health.*

Drug Cure Dropped in Philadelphia Hospital.—Two years' intensive study of morphin addicts in a special clinic conducted in the Philadelphia General Hospital under the auspices of the Rockefeller Foundation have shown the following results: (1) Contrary to general belief, the morphin habit does not invariably produce mental deterioration. In some instances it stimulated cerebration. (2) The drug is stored in the muscles of the body and not in the intestines, nerves, or brain substance. (3) Virtually one hundred per cent of the addicts applying for treatment professed a sincere desire to rid themselves of the habit. (4) Virtually one hundred per cent lie in making that statement. (5) The main effect of the work done was to reduce the tolerance and consequently the kick of the drug from an abnormally high dosage to a much smaller quantity. (6) Having reduced the dosage so low that the habit

cost only a fraction of what they had been paying, the addicts who took the treatment started all over again. (7) New York drug fiends made greatest use of the facilities afforded by the generosity of the Rockefeller Fund and the Philadelphia General Hospital. (8) Noting these results, the work has been abandoned.

The principal objective of the clinic was to give to morphin addicts such a cleansing that they could start anew a life without a shackling and impoverishing habit. The Rockefeller Foundation agreed to pay the entire cost of the long experimentation, the fees of doctors and nurses, the cost of medicines, etc. The City of Philadelphia, through the Philadelphia General Hospital, gave only the wards in which treatments were given.

From the beginning, work was confined almost wholly to morphin addicts. A few who made heroin their specialty appeared and their treatment in general resembled that for morphin. Heroin, since the international agreement made through the League of Nations several years ago, is unobtainable in drug stores in this country. Manufacture of this drug has been abandoned generally, although there is some smuggling and bootlegging in small quantities. Cocain addicts were not encouraged to apply for treatment. It was argued that it is almost as easy for an individual to stop the use of cocain as it is for an average cigarette user to stop the nicotine habit. Concentration, therefore, was upon morphin addicts, and the fame of the clinic spread like magic throughout dope circles in Philadelphia, New York, and Baltimore. Word was passed that a "ten-day cure" had been developed which was a wonder, and the procession of dope users became a continuous and clamorous affair. It soon developed that the main purpose of the pilgrims was to bring about a reduction in the dosage they were using, such a reduction as would give them the same kick for little money as they were getting at expenditures that kept them miserably poor. Some addicts use fifty grains of morphin daily.—*The Philadelphia Inquirer.*

A Terrific Loss.—Eighteen million dollars is the annual loss attributed to the lack of attendance due to illness and physical defects of Pennsylvania's school children, according to a report recently made by Dr. J. Bruce McCreary, Deputy Secretary of Health in *Pennsylvania's Health.*

The statement further indicates that hundreds of thousands of correctable defects are discovered by the medical inspection of Pennsylvania school children each year. The obligation for the correction of the defects rests with the parents. The lack of attendance in the schools due to illness and physical impairments directly traceable to parental neglect is one of the main factors for the expenditure of such a huge sum of saveable money.

If parents would follow up the conditions brought to their attention through the school medical inspection, vast numbers of children in Pennsylvania would derive more benefit from their instruction and would be so improved in their physical condition that much of the after-life consequences of neglect would not develop, the report concluded.

This report affords much food for thought. That "the obligation for the correction of the defects rests with the parents" is true, but is the medical profession free of blame? Most unfortunately, decidedly, not.

Many opportunities are afforded the attending physician to determine and correct physical defects in the preschool child, but too frequently, even when his attention is called to suspected conditions, he is apt to dismiss it with some foolish statement as "they are growing pains," or "he'll outgrow it," etc., without even having made a physical examination.

A child of the preschool age demands physical examinations from time to time, in order that any defects may be determined and corrected previous to admission to school. This is a great responsibility which the physician must realize and assume. The parents receiving this advice, in due course of lay education, will naturally consult their physician, and expect coöperation.

In too many instances children are admitted to school with undetected physical defects, due to carelessness or indifference on the part of the parents, their physician, or both. After the opening of school, the medical inspector makes a routine examination, and if any physical defects are detected, a note calling attention to them is sent to the parents. The parents may or may not take the child to their physician. Here, again, too frequently the physician does not coöperate, and nothing is done for the child, not even an examination being made. The people are being instructed in these matters, but when the child is taken to the physician, he wonders what it is all about. If no interest is shown by the parents, or they are misguided by an indifferent physician, the school medical inspector counters with a follow-up. Again nothing may be done. Then the medical inspector is very apt to urge that the child be sent to another physician, dispensary, or clinic to assure him a proper examination.

If the attending physician has been negligent, through indifference or carelessness, he need blame no one but himself for any adverse criticism.

We should like to see the problem here discussed eliminated by proper coöperation on the part of the attending physician.

Morbidity in Pennsylvania in September, 1929

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Aliquippa	5	1	1	2	12
Allentown	3	1	19	2	29
Altoona	2	1	3	3	10
Ambridge	0	0	0	0	0
Beaver Falls	0	0	0	0	1
Berwick	0	0	0	0	0
Bethlehem	0	0	5	0	0
Braddock	1	0	0	0	3
Bradford	1	0	1	0	4
Bristol	0	0	2	0	0
Butler	0	0	1	0	0
Canonsburg	1	0	0	0	0
Carbondale	0	0	0	0	0
Carlisle	0	0	0	0	0
Carnegie	2	0	2	2	2
Chambersburg	0	0	0	0	9
Charleroi	1	0	0	0	2
Chester	0	1	0	0	0
Coatesville	1	0	1	0	0
Columbia	1	0	0	1	0
Connellsville	0	0	0	1	0
Dickson City	0	0	0	0	0
Donora	0	0	0	0	0
Dubois	0	0	1	0	0
Dunmore	0	0	0	1	0
Duquesne	5	0	5	0	2

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Easton	2	0	3	0	1
Erie	0	1	2	3	29
Farrell	0	1	1	0	3
Greensburg	0	0	5	0	1
Harrisburg	1	0	3	0	12
Hazleton	8	0	1	0	6
Homestead	1	1	4	0	0
Jeannette	2	0	0	1	0
Johnstown	5	3	1	0	43
Lancaster	2	0	0	0	47
Lebanon	2	0	0	0	10
McKeesport	0	0	1	0	4
McKees Rocks	3	0	4	0	1
Mahanoy City	0	0	0	0	0
Meadville	0	3	0	0	2
Monessen	14	0	5	0	1
Mount Carmel	0	0	0	0	0
Nanticoke	0	0	0	0	0
New Castle	0	0	0	2	4
New Kensington	1	0	0	0	0
Norristown	1	1	0	0	3
North Braddock	1	1	6	0	0
Oil City	0	0	0	0	27
Old Forge	0	0	0	0	0
Olyphant	0	0	0	3	0
Philadelphia	48	6	59	15	221
Phoenixville	0	1	0	0	1
Pittsburgh	47	11	40	6	105
Pittston	2	0	0	0	0
Plymouth	2	0	1	1	0
Pottstown	1	0	0	1	0
Pottsville	7	0	0	0	2
Punxsutawney	0	0	0	0	0
Reading	5	0	3	0	25
Scranton	3	1	0	2	0
Shamokin	0	0	0	0	0
Sharon	4	13	1	0	5
Shenandoah	14	0	0	0	0
Steelton	0	0	0	0	0
Sunbury	1	0	0	0	0
Swissvale	0	0	1	0	1
Tamaqua	0	0	0	0	0
Uniontown	0	0	2	0	4
Warren	1	1	2	3	0
Washington	1	0	0	0	3
West Chester	0	2	0	1	0
Wilkes-Barre	16	0	0	1	22
Wilkinsburg	1	0	1	0	6
Williamsport	1	3	1	1	17
York	0	0	1	0	3
Total Urban	220	53	189	52	683
Total Rural	244	177	216	144	669
Total State	464	230	405	196	1,352

THE CENTENARY OF S. WEIR MITCHELL

For a score of years before 1914 the literary life of Philadelphia centered around the large four-story brick and stone house at 1524 Walnut Street, the office and residence of Dr. S. Weir Mitchell, distinguished physician and man of letters. In the world of medicine Dr. Mitchell carried on the Philadelphia tradition established by Dr. Benjamin Rush in the Revolutionary period. He was warned by Oliver Wendell Holmes that side shows generally fail to attract public interest, but this suggestion did not cause him to give up his interest in authorship. His two-volume novel, *Hugh Wynne*, has become an American classic, while several other works are still reprinted from year to year. Dr. Mitchell took pride in his nonprofessional associations, and moved in a memorable social group. The literary evenings at the old Walnut Street home constitute a glamorous chapter of the history of this city.

S. Weir Mitchell was a lively conversationalist; he displayed a vast capacity for friendship, an amazing energy, and a mind that was ever seeking to discover and to explain the ways of life. His was a personality so definite and highly colored as still to be vividly remembered. The publication of his *Life and Letters* is especially interesting at this time, inasmuch as Dr. Mitchell was born on Fifth Street, below Chestnut, in 1829, a hundred years ago.

Mrs. Anna Robeson Burr has pieced together the fragments of an autobiography which the busy physician did not find time to complete. It is not surprising that she has found errors in the manuscript, particularly as to dates, for Dr. Mitchell once confessed that "my memory for dates is feeble, and being a sensitive man I am glad that it is so." He carried on an extensive personal correspondence with such notables as Lowell, Meredith, Holmes, Carnegie, Phillips Brooks, Dr. Osler, James Whitcomb Riley, Earl Grey, and Presidents Taft, Roosevelt, and Wilson. President Wilson wrote of him: "I know of no one whose praise I would rather have."

His life was remarkable for the extent of his achievements and the variety of his contacts. He was the son of Dr. John Kearsley Mitchell, who for a time held the chair of chemistry in the old Philadelphia Medical Institute. As a child his mind was always interested in fantastic pictures. In his own words, "I must have been even then an imaginative child. I used to come home and relate things that I had seen, but that had no real existence—once, a gold carriage and ten horses. This was looked upon as a form of falsehood for which, once at least, I was punished." His sister tells the story that his first surgical operation was on her doll's eyes. "I fancied never was there such a doll, yellow satin and lace, red shoes and silk stockings, hair down to her waist, and eyes whose beauty I adored, and the young surgeon gouged Dolladeen's eyes out to find how they shut and opened. My heart was broken and I repaired with poor dolly to my father, and S W M was relegated to his room."

After that Weir Mitchell didn't know whether or not to go into the medical profession. "In fact, I did not know what to choose," he wrote in a fragment now published for the first time in Mrs. Burr's volume. "Certainly I had no leaning toward his (his father's) profession." Once he had chosen medicine, however, his father would not permit him to change his mind, saying: "You have always been an undecided person." This was true. It was difficult for him to decide whether he was before all things a physician or a novelist. Notwithstanding his youthful indecision, he read widely. "My habit was to lie on my belly on the floor of my room and read and read. I read no poetry, but fact and fiction came all alike to me, and I had the true book love. Nothing came amiss, from a novel to a dictionary." The fact that he read no poetry is most interesting. A few years before his death, in 1914, he remarked to Dr. Solomon Solis-Cohen that "I write fiction to pay for the publication of my poetry."

In this collection of letters there are not only interesting pen pictures of Philadelphia and Philadelphians, but illuminating sidelights on the American scene for a full half century following the close of the Civil War. —*Philadelphia Evening Bulletin.*

Tuberculosis Abstracts

A Review for Physicians

PREPARED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Published through the coöperation of the Pennsylvania Tuberculosis Society and the Medical Society of the State of Pennsylvania

SINCE Koch's discovery of tuberculin some forty years ago, the search for a satisfactory specific against the tubercle bacillus has been ceaseless. Failure to find it is not surprising. Protection against tubercle bacilli depends ultimately on the power of the body to encapsulate them. This power, or "sensitization," is acquired only as the result of harboring the bacilli in the tissues. How to "draw the teeth" of the tubercle bacillus so that it will stimulate the beneficent physiologic reactions resulting in tubercle formation and yet not destroy tissue has long challenged the research worker. Calmette has produced BCG, which is essentially a vaccine consisting of an attenuated strain of living bovine tubercle bacilli, which he claims are harmless and capable of engendering defense reactions of the cells. In America, opinion as to Calmette's claims has not yet crystallized and considerable skepticism is voiced.

Bacillus Calmette-Guérin

Professor A. Calmette of Pasteur Institute isolated a certain strain of bovine tubercle bacilli in 1908 and, during a period of thirteen years, attenuated them by 230 passages on a medium of potato glycerin and bile. After experimenting with cattle, he applied the vaccine to babies, and he and other workers have by this time vaccinated more than 200,000 infants. Within ten days after birth, he gives by mouth a recently prepared microbic emulsion (which contains *living* bacilli) in three doses at intervals of forty-eight hours. This is easily absorbed by the intestinal mucosa. The bacilli are carried by protoplasmic cells which have phagocytic powers into the lymphatic system, the lymph glands, the spleen, and the bone marrow. The vaccines are not digested, but behave as harmless parasites and in a short time elaborate the defensive substances.

Calmette has gathered an imposing array of statistics from health departments, clinics, and physicians. His interpretations of these figures indicate that vaccinated infants of tuberculous parents are greatly more resistant to tuberculosis than the unvaccinated, particularly if vaccination is carried out during the first ten days of life. Furthermore, he interprets his statistics to mean that the general infant mortality is decidedly less among vaccinated than among unvaccinated children. For example, in one group of 3,808 vaccinated children in tuberculous surroundings, 3.1 per cent died (from all causes) during the first year of life. The corresponding death rate for France of nonvaccinated children was 8.5 per cent, or more than twice as high. It is confidently claimed that the injection of BCG causes no unfavorable reactions, though rarely a slight rise in temperature is observed.

What is the duration of immunity acquired by this method? Calmette states it is longer than was at first supposed, and believes that the immunity is maintained and reinforced by the subsequent infections which a child encounters in a tuberculous environment. Apes vaccinated in 1923 were still refractory to the infection through cohabitation with artificially infected apes in 1927. —"The Preventive Vaccination of New-Born Infants against Tuberculosis by Means of the BCG." A. Calmette, *Bull. de l'Union Internationale contre la Tuber.*, Vol. V, No. 1, Jan., 1928.

Criticisms of BCG

Petroff, of the Trudeau Sanatorium, challenges Calmette's conclusions. He points out, among other things, that Calmette made no clinical and x-ray studies of the vaccinated infants, and that the mortality rate is not a suitable criterion to determine the protective value of the vaccine. He states that Calmette selected his cases to some extent, and that bad risks were not vaccinated. He quotes Greenwood and Rosenfeld as having analyzed Calmette's statistics, finding them faulty on several counts.

More specifically, Petroff questions the claim that BCG is without danger. He has, during the

past four years, studied the biologic characteristics of four separate cultures of BCG. "Every one of the cultures occasionally produced progressive tuberculosis in guinea pigs, and the lesions could be transferred to healthy animals." By cultivating BCG on fluid media, he succeeded in dissociating two distinct types of colonies; one waxy, with small wrinkles, with clear-cut, rounded, and raised outlines, the other less common, slightly smaller, with irregular wrinkles. He designated these cultures as "R" and "S" respectively. The "R" colony produced tubercles when injected into guinea pigs, but these tended to heal. The "S" colony produced progressive tuberculosis. Petroff claims that BCG is not "fixed" and that a virulent strain can be dissociated from it in the laboratory. Recalling that mutability is one of the characteristics of bacteria, he warns that BCG, harmless when injected, may in time regain virulence.

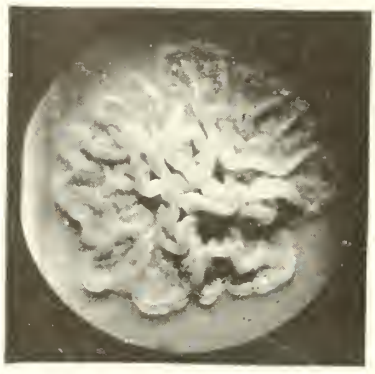

Figure 1—"R" colony of BCG, not virulent for guinea pigs. (Courtesy S. A. Petroff.)

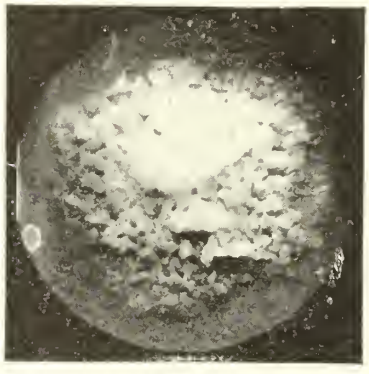

Figure 2—"S" colony of BCG isolated by Petroff, which proved virulent for guinea pigs. (Courtesy S. A. Petroff.)

In conclusion, he says: "We have now reached the crossroad and must decide as to what course we must pursue in our campaign against tuberculosis. Shall we tuberculize the whole world by adopting Calmette's method of vaccination with living microörganisms, . . . or shall we continue those preventive methods adopted some years ago in this country and Canada, and so successfully employed in reducing the mortality from tuberculosis and preventing infection in infants?"—"A New Analysis of the Value and Safety of Protective Immunization with BCG." S. A. PETROFF, *Amer. Rev. Tuberc.*, Vol. XX, No. 3, Sept., 1929.

BCG in New York City

Kereszturi reported experiences with the use of BCG on 183 babies in New York City. She concludes that infants of tuberculous mothers promptly vaccinated by mouth do not acquire tuberculosis as readily as the unvaccinated. She admits that the total number is small and not sufficient on which to base substantial conclusions, but is of the opinion that BCG vaccination is relatively simple and harmless, that it gives some immunity, and that the degree and duration of immunity cannot be determined as yet.—"Oral Vaccination with BCG on Human Beings in New York City." CAMILLE KERESZTURI, *Amer. Rev. Tuberc.*, Vol. XX, No. 3, Sept., 1929.

A Clinician's Viewpoint

Baldwin concedes that BCG is not without its danger but questions if that danger is greater than the risk a child runs in acquiring tuberculous infection in the natural manner. He inclines to the view that, while BCG has some virtue, it is at present an unnecessary instrument in the general battle against tuberculosis in this country. Assuming that tuberculosis infection is gradually declining among children in this country, perhaps in the same ratio as is the death rate, he points out that there may soon be a generation of people who have acquired no immunity against tuberculosis, at which time some such artificial protection as is afforded by BCG may prove to be a very good substitute for the naturally acquired immunity on which we depend today. He favors more investigation before universal application of BCG is made in the United States.

To the frequently asked question as to whether it is the vaccination or the separation of the child from its mother that protects the infant, Calmette's answer is that the separation is but a brief one and not sufficient of itself to protect the child. But, said Dr. Baldwin, the mere fact that such separation is effected implies that the mother has been apprised of the danger of exposing the infant to her tuberculosis and has been given a detailed explanation as to why the separation is necessary. Consequently, when the child is returned to its mother after a period of a few weeks, the mother will doubtless continue to exercise those precautions which have been impressed upon her; whereas, mothers whose babies have not been separated from them are not so likely to be aware of the danger of close contact.—Discussion, *New England Conference on Tuberculosis,* Hartford, Conn., April 26, 1929.

THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA

Officers' Department

WALTER F. DONALDSON, M.D.
Secretary
8063 Jenkins Arcade Bldg.,
Pittsburgh, Pa.

COMMITTEE ON PUBLIC HEALTH LEGISLATION

President William T. Sharpless has given an unusual amount of thought to the selection and appointment of members of the Society to its various standing and special committees. We believe that a review of the personnel of the committees referred to, as published in the November PENNSYLVANIA MEDICAL JOURNAL, will confirm this opinion.

We believe that our President may reasonably expect from all who accepted committee appointments such continuous month-through and year-round activity as will insure the people of our Commonwealth better medical service and better health than in any previous year, and also redound to the credit of his administration.

The personnel of the Committee on Public Health Legislation as published is as originally received from President Sharpless, and contains the same number as in the previous year. However, when attention was called to the limitation in the number comprising the Committee, as provided by the By-Laws, the personnel of the Committee, after much consideration, was changed to meet the requirement. The Committee is composed as follows: Paul R. Correll, Chairman, Easton; Edgar S. Buyers, Norristown; Walter F. Donaldson, Pittsburgh; Lewis Edwards, Kingston; I. Dana Kahle, Knox; George L. Laverty, Harrisburg; and William T. Sharpless, West Chester.

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to November 18:

ALLEGHENY: *New Members*—Frank B. Bortz, 223 Fifth Ave., Clifford B. Bryce, 1051 Lincoln Way, McKeesport; David L. Mendelblatt, 734 Braddock Ave., Braddock; Warren R. Wilkins, 525 Lincoln Ave., Bellevue; David P. Greenlee, Jenkins Arcade, John P. McGee, 121 University Place, James F. Johantgen, 121 University Place, Henry W. Pracht, 618 Herron Ave., Charles W. G. Schaefer, 3728 Brighton Road, Ladd E. Hoover, 519 N. Highland Ave., Pittsburgh. *Reinstated Members*—Francis L. Conwell, Freeport Road, Tarentum; John M. Flude, East End Savings & Trust Bldg., Pittsburgh. *Removal*—Thomas L. McCullough from Pittsburgh to Greentree Boro, R. D. 8, Crafton; J. Calvin Nicholls from Braddock to c/o Culbert, R. D. 1, Elizabeth; Benjamin F. Feingold, from Canton, Ohio, to 815 Monroe Bldg., Chicago, Ill.; William F. Weaber from Huntingdon, W. Va., to 223 W. 8th St., Allentown.

ARMSTRONG: *Death*—James G. Allison, Ford City (Baltimore Med. Coll., '95), Oct. 2, aged 62.

BEAVER: *Reinstated Member*—George L. McCormick, Beaver Falls.

BERKS: *Removal*—John L. Bower from Philadelphia to R. D. 2, Birdsboro.

CAMBRIA: *Removal*—Francis A. Donlan from Atlantic City, N. J., to 893 Millville Road, Altoona.

CHESTER: *New Members*—Harvey R. Glenn, Collamer; William D. Schrack, Phoenixville; Harlan H. C. Sharp, Downingtown.

CRAWFORD: *New Member*—Clarence M. Sonne, Titusville.

DAUPHIN: *New Members*—Byron B. Bobb, New Cumberland; John A. Daugherty, 226 State St., Forney P. George, 618 N. Third St., Harrisburg. *Transfer*—LeRoy S. Howard, 1825 Berryhill St., Harrisburg, from Huntingdon County Society.

ELK: *New Members*—Jesse D. Johnston, James L. Hackett, Emporium; Daniel R. Hughes, Elbon.

GREENE: *Death*—Frank S. Ullom, Waynesburg (Jeff. Med. Coll., '03), Oct. 29, aged 51.

INDIANA: *New Member*—W. H. Burgin, Indiana. *Removal*—A. B. Danisiwich from Homer City to 716 Church St., Indiana.

LAWRENCE: *Transfer*—Wayne W. Bissell, New Castle, from Berks County Society.

LEHIGH: *Death*—Victor J. Gangewere, Allentown (Medico-Chir. Coll., '07), Nov. 14, aged 50.

LUZERNE: *New Members*—William J. Daw, 1031 Wyoming Ave., Forty Fort; Rufus M. Bierly, Old P. O. Bldg., Water St., Pittston.

LYCOMING: *New Members*—Henry B. Mussina, 416 Pine St., Williamsport; George T. Waggoner, 6 W. Southern Ave., W. Williamsport. *Transfer*—Archibald M. Cook, 1st National Bank Bldg., Williamsport, from Philadelphia County Society.

MERCER: *Removal*—Melba M. Stewart from Sharon to 333 Freeport Road, Aspinwall (Alleg. Co.).

MONTGOMERY: *Resignation*—Frederick B. Mandeville, Bryn Mawr.

NORTHUMBERLAND: *Removal*—John H. Snyder from Altoona to Sunbury.

PHILADELPHIA: *New Members*—Frederick H. Allen, 1711 Fitzwater St., Jacob Cutler, 2104 Pine St., Phila-

delphia. *Reinstated Members*—George L. Bayton, 1840 Christian St., William F. Donnelly, 5038 Spruce St., Harvey W. Kline, 3638 N. 17th St., Joseph M. Looney, Jefferson Medical College, James G. McCollin, 5451 Angora Terrace, Edmund B. Sweeney, 1721 N. 16th St., Lynnley G. Smith, 1812 Diamond St., J. Clarence Keeler, Medical Arts Bldg., Fred D. Weidman, 20 Tenby Road, Llanerch, William C. Wood, 1930 Chestnut St., Philadelphia; George L. Stephen, Atglen; W. A. N. Dorland, 185 N. Wabash Ave., Chicago, Ill. *Resignation*—Donald H. Noble, Philadelphia. *Removal*—Paul R. Stalnaker from Philadelphia to U. S. Naval Tr. Station, Great Lakes, Ill., Jeannette H. Sherman from Philadelphia to Ridley Park, Carl Bachman from New York City to Chulalonghorn University, Bangkok, Siam, Everett S. Barr from Philadelphia to West Chester, M. Burnett Franklin from Philadelphia to 5 Grammercy Court, Atlantic City, N. J., Carl Schumann from Boston, Mass., to 441 S. Rampart Blvd., Los Angeles, Calif. *Deaths*—Sarah H. Lockrey (Woman's Med. Coll., '88), recently, aged 66; H. Augustus Bacon (Medico-Chir. Coll., '95), recently aged 61; Joseph S. Simsohn (Jeff. Med. Coll., '74), Sept. 18, aged 77.

Mabel H. Pearson, Atlantic City, N. J., was erroneously reported in this column in the November JOURNAL as being deceased. Dr. Pearson has resigned from the Philadelphia County Medical Society to join the Atlantic County Medical Society. She is in good health and in active practice.

SOMERSET: *Removal*—Earl Glotfelty from Jenners to 125 Harrison Ave., Waynesboro (Franklin Co.)

WASHINGTON: *Death*—George R. Conger, Taylorstown (Univ. Pitts., '92), recently, aged 64; William L. Scott, Joffre (Univ. Penna., '95), recently, aged 59.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since October 21. Figures in first column indicate county society numbers; second column, State Society numbers:

1929				
Oct. 21	Crawford	35	7806	$7.50
24	Indiana	59	7807	3.75
	Philadelphia	2108-2121	7808-7821	97.50
	Beaver	89	7822	7.50
Nov. 8	Allegheny	1300-1301	7823-7824	15.00
	Allegheny*	1-10	1-10	75.00
12	Lycoming*	1-6	11-16	45.00
	Chester	82-84	7825-7827	22.50
15	Dauphin*	1-3	17-19	22.50

* 1930 dues.

County Society Reports

BUCKS—NOVEMBER

The annual meeting was held at Doylestown, November 12th, at the Fountain House, with an attendance of sixty-three members and guests.

The following officers were elected to serve for the coming year: President, Charles S. Abbott, Bristol; vice-presidents, Linford B. Roberts, Wycombe, and Clairmont A. Kressley, Sellersville; secretary-treasurer, Anthony F. Myers, Blooming Glen; censors, Howard Pursell, Elmer E. Pownall, and John A. Weierbach.

Following a banquet the feature of the meeting was an address by Dr. John B. Deaver, of Philadelphia, on "Certain Phases of Peritonitis."

The woman's auxiliary held a meeting at the same time.

Dr. Deaver's discourse was very interesting, though rather dogmatic in certain of its phases. He emphasized the importance of clinical bedside diagnosis in contradistinction to laboratory methods in the final decision as when to operate and when not to operate in this chameleon-like disease.

He stressed the value of pain and the physical signs in many cases of peritonitis, and has frequently been able to determine the presence of adhesional internal obstruction of the bowel by the very positive clinical phenomena which are always present in these cases if properly elicited. Perforation of the abdominal viscera should always be sought for and immediately closed, rather than to wait for symptoms. Delay in this condition is absolutely fatal. In the early stages of appendicitis, he dwelt forcefully upon certain routine procedures before operating.

He spoke frequently of his "regulation treatment" in these cases, including rest in bed in a vertical position, meaning that the patient is kept in an upright position supported by pillows constantly; also giving narcotic sedation to relieve pain, beginning with minimum doses and repeating with increased dosage at intervals, as the case requires; absolute abstinence from food and liquids by mouth; and gastric lavage if nausea or vomiting is present.

His experience is that these patients are usually admitted late at night, and if operated upon at once, more severe reactions occur than when "regulation treatment" is instituted and the patient is allowed to rest until morning.

There seems to be a wide variation of opinion among the profession as to the advisability of routine regulation treatment in cases of acute appendicitis when suppuration is imminent.

J. FRED WAGNER, M.D., *Reporter.*

DELAWARE—OCTOBER

The October meeting was addressed by Dr. George P. Muller, of Philadelphia, his subject being "Surgery of the Chest."

In discussing acute empyema, he said that the operative mortality ran as high as twenty per cent up to the year 1924, but since then to 1928 no deaths from this disease occurred. The main question for the surgeon to decide is whether he should go in between the ribs, or do a rib resection and introduce one or two large tubes for drainage.

Chronic empyema is one of the hardest propositions to handle. Because of dense adhesions to the parietal pleura, the lung undergoes a secondary fibrosis, and all the operations one can perform will not effect a cure. The lung must come out to the chest wall, or the chest wall must approach the lung. Decortication must be done under certain conditions, and if complicated further by a bronchial fistula, the cavity must be clean and dakinized, though at times a plastic operation must be done.

Tuberculosis of the lung: In compression of the lung with nitrogen or air, from 500 to 1000 c.c. are introduced, and the lung is allowed to reëxpand slowly in six months to a year, usually followed by good results. Keyhole surgery, attacking the adhesions with a cautery through a small opening, is performed. Removal of a rib to collapse the lung is done with a ten-per-cent mortality within four months. By removal of posterior segments, the chest wall may be swung back like a shutter blind, a modified Sauerbruch. Sections of the pleura are not so important as formerly.

Tumors of the lungs: No cases have as yet been reported of a removal with cure. Mediastinal tumors

(dermoids, fatty, and cystic) are now easily approached either anteriorly or posteriorly.

Cancer of the esophagus: There has been only one case of removal reported after which the patient lived thirteen years and died of pneumonia. Several of these cases are reported in which the patient survived one year with a recurrence later.

Abscess of the lung: Forty per cent of these cases follow tonsillectomy. This first attracted attention about the year 1910, around the time of motor-driven anesthesia apparatus. The incidence of lung abscess then was about 1 to 1,000, later 1 to 2,500, and now about 1 to 10,000. How does it occur? Either by aspiration or venous thrombosis. It is believed that most postoperative pneumonias are embolic. These are rare in gall-bladder and gastric operations, but common in tonsillectomies. The bronchus is plugged by mucus blocking, due to aspirated infection from the mouth, and the lung infection is then set up.

Chronic sinus infections are also a very possible etiologic factor in lung abscesses or bronchiectasis. In a group of forty-four cases, tuberculosis was often suspected and misleading, as no tubercle bacilli were found. The bronchoscope here is invaluable, for very often a foreign body is found, such as a kernel of corn, pea, peanut, etc. X-ray studies are also helpful.

Treatment: Practice postural drainage; high caloric diet—3,000 calories or more; rest in bed; and introduce the bronchoscope twice a week, in this way sucking up balls of mucus and clearing the way for the thinner and more fluid pus. If the x-ray shows the lesion near the hilum of the lung, then one must allow at least four to five months for such treatment. If the abscess is near the periphery, surgery must be resorted to for better drainage.

The operative mortality varies from 18 to 35 per cent, which is very high, and this is the primary hospital type of mortality. Another 10 to 15 per cent dies in one to one and a half years after returning home, because the other lung becomes abscessed or a brain abscess often ensues. At operation, three or four ribs may be opened, the cavity packed with gauze moistened with a weak mercurochrome solution, and the skin closed for a week or more, then again opened and the abscess in the lung tissue may then be explored and drained. If complicated by bronchiectasis, bronchoscopic treatments are indicated.

Bronchiectasis (alone, without an abscess): Here stimulating medicinal treatment and bronchoscopic treatment may aid much. In a one-sided cavity more complete removal of the ribs may be done. Lobectomy shows a 42 per cent mortality; a partial section is a better proposition.

ALBIN R. ROZPLOCH, M.D., *Reporter.*

LYCOMING—NOVEMBER

The annual fall clinic meeting was held November 8th at Medical Hall, Williamsport Hospital.

This meeting marked the opening of a suite of rooms at the hospital as a permanent meeting place for the Society. The second floor of the building known as the Children's Ward was remodeled through the joint efforts of the Society and the Hospital management. A spacious hall with a seating capacity of about 125 persons is thus provided. In addition, there is a large room for the use of the board of directors and a room for the library and the secretary's desk.

The dedicatory address was made by Seth T. McCormick, Esq., chairman of the board of managers of the Hospital, and a response was made by Dr. C. A. Lehman, president of the Society.

The speakers on the scientific program were all from Temple University. The morning program consisted of clinics. Dr. Luther C. Peter, professor of ophthalmology, gave an excellent clinic on "Inflamed Eyes," presenting cases of glaucoma, chronic keratitis, chronic iritis, chronic conjunctivitis, and traumatic ocular conditions.

Dr. William A. Steel, professor of principles of surgery, presented cases of Buerger's disease and Raynaud's disease, and illustrated his cases with charts and photographs.

Dr. William E. Robertson, professor of medicine, presented a case of pernicious anemia, and dwelt upon the diagnosis and modern treatment. He also showed several cases of chronic arthritis.

Dr. Frank C. Hammond, professor of gynecology, reviewed the subject of genital bleeding exhaustively.

Following the scientific program of the morning, an excellent dinner was served in the dining room by the Hospital management.

In the afternoon, Dr. Robertson discussed "Cardiorenal Disease." He pointed out that this is a syndrome rather than a clear-cut disease. He mentioned as etiologic factors in its production heredity, infections—systemic and focal or "concealed," age, excess of food, and physical or mental strain. In the pathology of arteriosclerosis there is both the arteriocapillary fibrosis of Gull and Sutton and vascular disease of the intimal and mesial types, the latter being common in luetic conditions. The dominant factor in the prognosis is the efficiency of the heart itself. Here a carefully taken history is of utmost importance. The response of the heart to exercise is important. Normally, a half-hour after exercise there is a rise in blood pressure and a return of the pulse rate to normal or nearly so. In a diseased heart, the blood pressure falls and the pulse rate rises. The size of the heart, as determined by percussion or the x-ray, and the character of the electrocardiogram are helpful factors. Râles heard at the right base constitute an important and often an early sign of failing compensation.

Dr. Peter discussed "Squint and Its Early Management." He made a plea to the general practitioner to refer these cases early to the ophthalmologist, so that the most good may be accomplished. The chief causes of squint are heredity, absence of the fusion faculty, a refractive error, and usually a precipitating factor such as fright, convulsions, severe illness, etc. The symptoms include the squint and the amblyopia of squinting, with the development of a central scotoma in the affected eye. The treatment consists: (1) of preventing amblyopia by forcing the child to use the poor eye, (2) of proper refraction, which should be done as early as sixteen months of age, (3) of training the fusion faculty, which is begun at the age of three or four years, and (4) of operative procedures, which are necessary only if the other measures fail.

Dr. Hammond spoke on "Sterility." He pointed out that before the study of the wife is begun, the husband should be eliminated as a factor, since in from thirty to fifty per cent of cases the cause of sterility lies in the male. Common causes in the female include retrodisplacements, tubal occlusion, endocervicitis, fibroid tumors, and endocrine disturbances. A complete study of the patient as a whole is essential to success. Local treatment depends upon the causative condition.

Dr. Steel read a paper, illustrated with lantern slides, on "Internal Drainage of the Gall Bladder," in which he advocated cholecystogastrostomy or cholecystoduodenostomy as the operation of choice in a large percentage of the cases of gall-bladder disease. He pointed

out that cholecystectomy seems to be the operation of choice today, but that it offers a rather high primary mortality, even in the hands of the skilled operator, and that serious sequelæ occasionally follow. Cholecystostomy is a safer procedure, especially for the surgeon of limited experience, but it is frequently followed by a recurrence of symptoms. By anastomosing the gall bladder to the duodenum or stomach, according to the exigencies of the particular case, permanent internal drainage is afforded. In the human, this fistula is permanent, and does not lead to secondary infection of the gall bladder and liver, as has been noted in animal experimentation. The bile is preserved to digestion, reformation of calculi does not occur, and biliary colic and jaundice are prevented. The speaker quoted statistics verifying his conclusions about the safety of the operation. Lantern slides demonstrating the technic in detail were presented.

Dr. W. Wayne Babcock, professor of surgery, spoke briefly on the possibilities of cardiac and vascular surgery.

A testimonial dinner was served in the evening at the Lycoming Hotel in honor of the visiting speakers.

F. C. LECHNER, M.D., *Reporter.*

PHILADELPHIA

October 23, 1929

The president, Dr. John A. McGlinn, in the chair.

SYMPOSIUM ON CHRONIC ARTHRITIS

"The Etiology of Chronic Arthritis." By RUSSELL L. CECIL, M.D.—This paper is based on work carried on during the past three years at the Bellevue and Cornell clinics. Arthritis is classified as hypertrophic and atrophic, excluding the specific arthritides. Hypertrophic arthritis affects the bone and cartilage, and occurs in persons of middle age or older. Its predisposing factors are age, overweight, poor posture, deformities, old fractures, or persistent irritants. It is noninfectious, a degenerative change. It is persistent, fixed, progressive, and not a true deformity or ankylosis.

It is the atrophic, infectious, or rheumatoid arthritis of which we aim to learn more of the etiology. The predisposing factors are fatigue, strain, exposure, trauma, a neurotic or phthisical make-up, and heredity. Its active causes have been stated by Billings and Rosenow to be largely focal infections, and in this view the author concurs. The tonsil is the most important focus, the teeth next, then the gastro-intestinal tract and sinuses, though whether or not the colon is a primary factor is doubtful. An analogy may be drawn to gonorrheal arthritis, wherein the focus lies in the prostate or posterior urethra, and symptoms follow in the joints.

What are the bacteria which are responsible, especially in the polyarthritic cases (for the single joint involvements present other problems)? The streptococcus is found in a high percentage from cultures of infected teeth and tonsils, and fifteen years ago Rosenow found them in lymph nodes adjacent to affected joints. A joint puncture will yield a growth of streptococci in twenty per cent of the cases. Blood cultures reveal an organism that will check with that secured in the foci.

In conclusion, hypertrophic arthritis is a disease of age, a degeneration, and a desiccation, like arteriosclerosis. The atrophic form is inflammatory, migratory, with swelling of the soft tissues as in rheumatic fever, and with true granulation tissue. There is a primary infection of the synovial membrane, resembling the picture of chronic tuberculosis. The results are fibrous tissue, scarring, and obliteration of the joint cavity. The best time for culturing is in the migratory period.

"Bacteriologic Findings in Chronic Infectious Arthritis." By EDITH E. NICHOLS, M.D.—The technic of obtaining the blood culture was given in detail. In 48, or 61½ per cent of 78 patients whose blood was cultured, a Gram-positive micrococcus, occurring in pairs or short chains resembling the streptococcus, was obtained. In deep cultures these organisms produced hemolysis in twenty-four hours, but not so completely as do the hemolytic streptococci. These cultures were checked with a series of other forms of arthritis, other infectious diseases, and with normal persons. The 54 controls all gave sterile cultures, including seventeen cases of degenerative arthritis.

The synovial fluid, synovial membranes, and curettements from joints at operation were also cultured. Of 34 cases studied, 27 gave positive cultures, and of these patients, 19 had positive blood cultures and the organism found in each culture checked in appearance and type. In some old cases the joint culture was positive when the blood was negative, and in others the reverse was true. In checking these joint cultures with controls, as was done in the blood, the results were the same—all, even five cases of degenerative arthritis, being sterile. The organism produces a typical fermentation of sugars. Cross-agglutination tests were made, with 43 being positive to the typical strain. Absorption tests also were carried out. Correlation was made of the streptococci isolated from the blood with those from the joints and from the foci of infection.

In summary, streptococci can be isolated from the blood in at least 61 per cent of cases. Of these organisms isolated, 83 fall into one biologic group, an atypical strain. An identical organism can be obtained from joints, blood, and focus. Sera in chronic arthritis have a high agglutination power for the streptococcus found in the blood stream.

"Experimental Streptococcus Arthritis in Rabbits." By WENDELL H. STAINSBY, M.D.—Of the various laboratory animals used, the rabbit has proved most satisfactory for work on arthritis. Arthritic signs appear in a week after injection of the organism—limping, then slight swelling. During the first month it progresses to other joints and may remain active for three months, after which time it becomes latent, then retrogressive, though the joint never returns quite to normal size or use, and some proliferation of the bone is demonstrable in the x-ray. The animals suffer a short initial temperature and considerable loss of weight. The wrists, elbows, knees, and interphalangeal joints are most commonly affected. Cultures taken from the joints early are uniformly positive, and the organisms recovered produce polyarthritis in other rabbits. Autopsy reveals that there is loss of weight, enlargement of the joints, and increase in the joint fluid, which is cloudy, mucoid, with leukocytes, and thickening of the periarticular tissues. Other organs, including the heart valves, are unaffected. Histologic sections made at different stages of the disease show the transition from the acute to the chronic stage.

DR. CECIL, in summarizing, said he is convinced that all chronic arthritis falls into two groups—the hypertrophic and the atrophic; that the streptococcus is responsible, and in a large percentage this is biologically a specific streptococcus. The polyarthritis is characteristic, with a definite clinical course, and streptococci of an identical morphology may be isolated from blood, joints, and foci. This, injected into rabbits, produces

a polyarthritis, chronic and nonsuppurative. Cultures from the rabbits produce the same organism, and injection of this into other rabbits causes a polyarthritis —thereby fulfilling Koch's postulates. Interest in the agglutinin reaction now is keen, since it, like the Widal, may prove of diagnostic value. Optimism as to the use of vaccines in therapy waxes and wanes, but they do have one definite effect, as in most patients, after a series of vaccine injections, the blood is sterile.

Discussion: DR. JAMES CRAIG SMALL commended the worth-while work being done on this subject. In the pure form, arthritis is easy to diagnose, but the classification of rheumatic disease, with its neuritis, myositis, sciatica, and lumbago, is difficult. The work on the recovery of streptococci in the cases of pure atrophic arthritis has not been corroborated, but these studies are an advance. Streptococci have been found not only in lymph glands near the affected joints in the atrophic form but also in hypertrophic arthritis. There are many types of streptococci, and a true agglutination reaction is difficult to obtain. Widely different types of streptococci have produced arthritis in rabbits, for these animals are extremely susceptible to joint involvement. The very difficult technic necessary to get the slow-growing organism has been outlined.

A clinical difficulty arises also in regard to specificity, in the fact that these patients are unusually susceptible to certain soluble products of streptococci in trifling amounts. They exhibit four reactions—a local, intradermal, reaction; focal, with pain, stiffness, swelling, and redness; general, with rise of temperature, increase in pulse, malaise, and perhaps nausea and vomiting; and localizing, in the focus—a suspicious tooth abscess, tonsillitis, or a gastro-intestinal disturbance. As little as one twentieth of the soluble extract of a single streptococcus will produce these reactions, hence it may be presumed that the question of allergy enters into the etiology.

DR. RALPH PEMBERTON is persuaded that a variety of organisms give the manifestations of arthritis and that the specificity is hard to prove. Infection plays a large, but not the only rôle in the disease, and the organisms may be but the exciting factor on a predisposing background. At a meeting dealing with rheumatism held recently in Kansas City, this concept of the disease called chronic rheumatism or arthritis was drawn up: It is an important social and industrial handicap; it is a generalized disease with joint manifestations; it presents recognizable prodromata; no single infectious agent or dietary deficiency or metabolic disturbance is the sole cause, and any one or combination may underlie the cause of the disease. The conscience of the medical profession must be awakened to its treatment, and the public must be warned of the predisposing causes and their treatment. Optimism may be felt when treatment of arthritis includes a combination of coördinated measures. Dr. Cecil is to be congratulated on his work.

DR. CECIL, in closing, said that corroboration of his work is difficult because of the difficulty of the laboratory technic. He avoids spontaneous agglutination by the use of potato broth. Susceptibility of patients to the vaccines varies. While the factors must certainly be divided into predisposing and exciting, he feels that there is beyond doubt one kind of arthritis which is a specific, streptococcal disease.

MARY A. HIPPLE, M.D., *Reporter.*

WARREN—OCTOBER-NOVEMBER

At the October meeting Dr. Floyd G. Schuler read a paper on the treatment of pneumonia, and Dr. George S. Condit reported on the use of the x-ray for the relief of pain.

Twenty-three members attended the November meeting. Reports from the State Society meeting at Erie were given by the delegates, and very interesting reports were presented by several members who attended the Interstate Post-Graduate Congress at Detroit. Dr. Otis S. Brown referred to the use of live maggots in the treatment of osteomyelitis. This was commented upon by several members who had seen the contamination of wounds by maggots.

The essay was presented by Dr. Hugh R. Robertson, who reviewed the recent literature on asthma. The modern writers still recognize two forms—one allergic, corresponding to the extrinsic, and the other bronchitic, or intrinsic. Fifty per cent of the cases under fifteen years of age are of a hereditary nature, but the child's sensitiveness may be different from that of the parent. The infective type is usually due to infection in the respiratory tract. Chronic sinusitis is alleged to be a prominent cause, but this form may coexist with the allergic type. During an attack the administration of adrenalin and atropin is recommended, and ephedrin in mild cases. Intravenous administration of calcium is advised to prevent attacks. Relief has been afforded by the cleaning up of foci in the ethmoids and by the use of autogenous vaccines. Foreign bodies in bronchi and lungs must be ruled out by x-ray and bronchoscopic examinations. In the chronic bronchitic form the iodids and codein are still considered valuable. In the allergic types patients may be sensitive to several substances, and a great many tests must be made if success is to be obtained. Forty or fifty agents may be required.

Drs. F. M. Buckingham, Tidioute, and J. T. Valone, Warren, were elected to membership.

MICHAEL V. BALL, M.D., *Reporter.*

The Woman's Auxiliary to the Medical Society of the State of Pennsylvania

MRS. WILDER J. WALKER, *Editor*
546 South Street, Greensburg, Pa.

A WORD FROM THE NEW PRESIDENT OF THE STATE TO THE AUXILIARY

Greetings to all the 1,703 Auxiliary members in the State! May this be the banner year for every county!

Judging by the splendid meeting in Erie, and the interest shown by the 275 women in attendance, including 51 delegates out of a possible 70, or thereabouts, my wish and your fulfillment will be one.

All thanks to our kind hostesses in Erie, who gave us so warm a welcome and provided so admirably for our comfort and happiness.

My first pleasant duty is to present to you our youngest member, Delaware County Auxiliary, organized October 29th as a direct result of the Erie meeting. No grass grew under their feet —a happy augury for their future achievement.

The great length of my report of the National

Auxiliary meeting in Portland, which embodied the plans and wishes of our national president, Mrs. Hoxie, precluded any message of my own in the November JOURNAL. I hope, however, to send a few words each month on some special topic. For a general outline of my suggestions, I refer you all to a lengthy letter sent to all county auxiliary presidents and members of the State Board.

This month I bring you a request approved by Dr. Sharpless, from Dr. J. Allen Jackson, chairman of the State Committee on Mental Hygiene, that you devote at least one meeting to this subject. Dr. Jackson will send interesting speakers any and every where for the whole or part of programs. Will you call on him for your next meeting, and will you invite the women's clubs of your community to that meeting?

Again greetings and best wishes to you all. Be sure to look me up when you are in Philadelphia.

Cordially yours,
CORINNE KEEN FREEMAN.

A MESSAGE FROM OUR STATE PRESIDENT

TO THE COUNTY PRESIDENTS

This brings you greetings and best wishes for a very successful year, the best the Auxiliary has ever had.

My impression, after going to the National Convention in Portland and the State meeting in Erie, is that the Auxiliary has distinctly arrived. We no longer exist on sufferance. Those in authority look to us for material help in putting over definite pieces of work, and I am sure that, as Job's war horse of old, you will all "paw in the valley and rejoice in your strength."

To help you in your campaign, I hope you will call often on your district councilor. She will be glad to visit you and consult with you as often as you invite her, and will act as liaison officer between the county auxiliaries and the State Board.

Mrs. Theodore B. Appel is the new chairman of District Councilors, and she habitually accompanies Dr. Appel in his trips about the State. She will advise you in advance of her coming, and will keep in close touch with you and your councilor.

The new National By-Laws direct all county auxiliaries to request their county medical societies to appoint an advisory committee of three, to whom all questions of policy, particularly in regard to outside work, shall be referred. Please take the proper steps at your next meeting to secure the appointment of such a committee. As it is to be a permanent committee, with a fixed policy, you will find it a great stabilizer.

At my request, and with the approval of Dr. Sharpless, president of the State Medical Society, Dr. Theodore B. Appel, Secretary of Health for Pennsylvania, is having a survey made to determine in what ways the Auxiliary can assist the State Health Department. You will receive shortly a request for a definite piece of work in your own county, which your auxiliary may or may not be able to undertake alone. Should you feel it beyond your powers, I suggest that you try to interest the women's clubs or some other well-established organizations in your own community and get their help. Please remember that all such work must be done with the approval of your county medical society, and at the request and under the supervision of the Department of Health. No project must be undertaken outside of the auxiliary without first consulting the proper authorities, including your district councilor.

Mrs. J. Newton Hunsberger is chairman of the new State Committee on Public Health Education, and she, in consultation with you and your district councilor, will advise you as to the best way of working out Dr. Appel's suggestion.

In regard to coöperation with women's clubs, I may say that, again with Dr. Sharpless's approval, I sent a letter to Mrs. Frick, president of the State Federation, asking her to bring before the recent convention a request that each club should devote at least one meeting a year to health. I told her that the Auxiliary was a state-wide body and was prepared to assist in arranging programs and securing speakers, and I sent to the chairman of the Speakers' Bureau of the Federation a list of good speakers. I shall be glad to have similar suggestions as to good speakers from you. Mrs. Edward Lyon is our new State Public Relations chairman, and will be glad to confer with you on all these phases of work.

The Women's City Club of Boston for the past three years has engaged the services of a competent physician for three or four days, and arranged a regular schedule of 45-minute examinations for its members, at $10 each. This seems a very practical way of encouraging periodic health examinations, and I refer you to the State chairman of the new Committee on Periodic Health Examinations, Mrs. John H. Page, for details of the arrangements. One Virginia county auxiliary sends its members an annual birthday card as a reminder.

Mrs. Pardoe continues as chairman of *Hygeia*, and we hope to move Pennsylvania up from sec-

ond place to first at the National Auxiliary meeting in Detroit next spring. Should you care to place a few trial subscriptions, at $1.00 for five months, in reading and rest rooms, etc., with the request that if the magazine proves popular, the management will subscribe regularly?

Contributions to the Benevolence Fund last year totalled over $3,000, with twenty-three out of thirty-three counties subscribing. Let us better this splendid record before we go to Johnstown next October.

A Committee on Archives is another new departure, chairman, Mrs. David B. Ludwig. Mrs. Ludwig is busily compiling a history of the State Auxiliary, and begs for material. Each county auxiliary is urged to collect and preserve everything relating to early physicians and their work.

The new Publicity chairman is Mrs. Wilder J. Walker. Please make a note in your engagement book to send her on the 8th of each month a report of your doings. This gives her exactly one week to prepare the material for the Pennsylvania Medical Journal. If your county medical society publishes a regular bulletin, please see that Mrs. Walker's name is put on the mailing list.

Mrs. Lawson is now head of the Committee on Legislation. Dr. Correll promises us plenty of work to do.

With Dr. Sharpless' sanction, Dr. J. Allen Jackson, State Hospital, Danville, asks each auxiliary to devote one meeting during the season to mental hygiene. If you feel unequal to staging this alone, consult your district councilor. You may be able to join forces with neighboring auxiliaries and women's clubs, and get up a fine meeting. Dr. Jackson will send interesting speakers for whole or part programs.

At the Board meeting held on the 30th of September, it was voted that the fiscal year of the State Auxiliary should be from the 1st of September to the 31st of August. Counties in arrears when the books close on the 31st of August will not be entitled to send delegates to the State meeting. The number of paid-up memberships on the date of each county auxiliary's annual meeting determines the number of delegates to which it is entitled. A uniform receipt form for county dues will shortly be furnished you by the State treasurer.

Please send me the names and addresses of your new county board immediately after your annual meeting, also a list of paid-up members. This is important. And don't forget to notify me of changes in your board.

As I told the delegates at Erie, I hope to visit every Auxiliary during the year. Please inform your district councilor what date you prefer. My November schedule is pretty full, and December seems a poor time for everybody, but I hope to be very busy in January and February. Necessarily, I must visit counties in groups, but I shall endeavor to suit your convenience.

Should you come to Philadelphia, I hope surely to see you, and as often as possible. I am taking this responsibility very seriously, and shall give up my entire winter to the Auxiliary. I count on your coöperation.

Cordially yours,

Corinne Keen Freeman.

PRESIDENTIAL PEREGRINATIONS

September 30 to October 3—Erie, State Auxiliary Meeting.

October 22 to 23—Charlottesville, Virginia State Meeting.

October 29—Chester, Delaware County Meeting.

October 31—Scranton, Lackawanna County Meeting.

November 6—Lancaster, Lancaster County Meeting.

November 11—Lebanon, Lebanon County Meeting.

November 12—Doylestown, Bucks County Meeting.

November 13—Washington, Washington County Meeting.

November 14—Pittsburgh, Allegheny County (conference only).

November 15 to 16—Chicago, Ill., National Board Meeting.

TOUR REMINDER

(1) *To the Members of the Executive Board:* The regular meeting of the Executive Board of the Woman's Auxiliary to the Medical Society of the State of Pennsylvania will be held in Altoona on Friday, February 7th, at 12 noon. Detailed notices will be sent out on January 15th. Please arrange winter trips accordingly.

(2) *To the County Presidents:* Please send me at once in *triplicate* a corrected list of county officers, committee chairmen, and all members of your auxiliary.

Fanny Jennings Ross (Mrs. George Gorgas),
Corresponding Secretary,
1530 Locust Street, Philadelphia.

COUNCILOR DISTRICT ANNUAL REPORTS

Second Councilor District. Members of the Auxiliaries of the Second Councilor District held a luncheon meeting on September 12th, at the Log Cabin Tea Room, Valley Forge, with eighty members present. In the absence of Mrs. George W. Miller, the District Councilor, Mrs. J. Newton Hunsberger, Norristown, national president-elect of the Auxiliary to the American Medical Association, presided. Dr. Herbert W. Burk greeted the members and conducted them through the chapel and historical museum. Greetings were also

extended by Dr. William T. Sharpless, of West Chester, president-elect of the State Medical Society, who outlined the work for the coming year. Dr. Theodore B. Appel, Secretary of Health of Pennsylvania, spoke of the State health program. Honor guests were Mrs. Walter Jackson Freeman, president-elect of the Woman's Auxiliary to the State Society, and Mrs. William E. Parke, organizer of the auxiliary in Pennsylvania, both of Philadelphia. Assisting hostesses were: Mrs. Edgar S. Buyers, Norristown; Mrs. William T. Sharpless, West Chester; Mrs. Theodore B. Appel, Lancaster; delegates, Mrs. I. P. Hollingsworth (Chester Co.), Mrs. W. S. Erdman (Bucks Co.), Mrs. Warren Z. Anders (Montgomery Co.), Mrs. Elmer E. Hartman (Berks Co.), and Mrs. Wilmer Krusen (Philadelphia Co.). This meeting was held in conjunction with the meeting of the Second Councilor District of the State Society, comprising counties Bucks, Berks, Delaware, Chester, Schuylkill, and Montgomery.

Third Councilor District. Mrs. M. I. Penteeost, of Scranton, reported that, with the exception of two interviews, the work had not prospered in her district, and asked to be relieved of the responsibility.

Fifth Councilor District. Mrs. E. B. Marshall reported opposition to the organization of auxiliaries to Cumberland and Adams County Medical Societies.

Sixth Councilor District. Mrs. Andrew L. Benson reported the organization of Blair County Auxiliary, with Mrs. Augustus S. Kech as president; also the probable reorganization of Huntingdon County.

Seventh Councilor District. This district is composed of six counties, of which four now have auxiliaries organized: Lycoming, four years old, membership of 60; Potter, three years old, membership of 10; Clinton, two years old, membership of 6; and Tioga, two months old, membership of 10. Elk and Union Counties have not responded with any interest to repeated effort. The councilor, Mrs. Edward Lyon, reports the miles traveled 400, letters written 25, one county organized, and one county reorganized during the year. On July 9th she was the guest of Potter County Auxiliary at the annual luncheon meeting at Gaines, and gave a talk on auxiliary work. On August 3d she attended the organization meeting of Tioga County, and on August 9th she visited the Clinton County Auxiliary.

Tenth Councilor District. Mrs. J. I. Johnston reports as follows: Four counties compose this district—Allegheny, Beaver, Lawrence, and Westmoreland, all having auxiliaries except Lawrence. All efforts made to bring that county into line have been futile. All the other counties are active, holding regular meetings of a splendid social and educational type. The councilor has visited Beaver County once, Westmoreland twice, and attended all the meetings in Allegheny County.

A district meeting was held in November at the Hotel Schenley, Pittsburgh, with about forty women present. Dr. Paul R. Correll, chairman of the State Society Committee on Public Health Legislation, was the speaker, and was introduced by Dr. Lawrence Litchfield, councilor of the district. The Allegheny Auxiliary did much active work at that time, having a local committee of fifty women on call to do anything asked of them by the Medical Society. In addition to regular work under the direction of the State and National organizations, this county has undertaken for its local work the establishment of a loan fund to aid medical students in the University of Pittsburgh Medical School. This fund is administered by a joint committee from the Medical School and the auxiliary.

At the annual meeting of the Allegheny County Auxiliary in May, we really had another district meeting, since representatives of eight counties responded to the invitation to tell some things of interest from their counties.

Beaver County has been active along the line of periodic health examinations. They have been holding meetings quarterly, but now find more frequent meetings necessary. They have a large and interested group of women. On September 12th both the medical society and the auxiliary were entertained at the tuberculosis sanatorium at Monaca. Each group had its own meeting, and a physician from a neighboring county spoke upon the "White Plague" before the auxiliary. After the meeting dinner was served, followed by a social hour.

Westmoreland County is well organized and doing much local work. The councilor visited them twice, once at the annual luncheon meeting, and again at a meeting held at the same time as the clinical meeting of the medical society. As the latter is always an attraction for all the surrounding counties because of the value of the clinics, in reality it is a district meeting, many women accompanying their husbands, but holding their own meeting. A dinner followed by an entertainment and speeches made an enjoyable evening.

A survey of the work in all the counties of the district shows a distinct and satisfactory improvement.

Eleventh Councilor District. The councilor, Mrs. J. J. Meyer, reports as follows: Of the five counties organized in this district, I have visited three, including my own—Fayette, Somerset, and Cambria. At the annual meeting of the Allegheny County Auxiliary, I was able to meet and talk with representatives from Washington and Greene Counties, so that I have also made some contact there.

Bedford County is not organized, the medical society having been only recently reorganized. As soon as the doctors are ready, an effort will be made to have them coöperate in forming an auxiliary.

Somerset is the newest of the organized auxiliaries in this district, and reports an active society. They met in joint session with the Cambria County Auxiliary in April, at which time we had as a speaker Miss Katharine A. Pritchett, Consultant in Administrative Nutrition of the State Department of Welfare, Harrisburg.

In this district Fayette County has outshone all others in enthusiasm and achievements.

In May I called a councilor meeting of the presidents or representatives of all counties of the district to meet in Johnstown. Mrs. J. I. Johnston, District Councilor chairman, was present. Only two counties responded, Cambria and Fayette, but from the point of view of inspiration and ideas interchanged, the meeting was very much of a success.

BERTHA GILL (MRS. J. I.) JOHNSTON, *District Councilor Chairman.*

ANNUAL REPORTS OF COUNTY AUXILIARIES

Allegheny. In 1925, at its beginning, the auxiliary enrolled 242 active members and three special active. In four years, with some losses because of resignations, the enrollment has passed the 300 mark in active, associate, and honorary membership.

Mrs. Theodore Baker was elected president for the term 1928-29. Six meetings were held during the year,

and many interesting addresses were delivered. At the annual meeting on May 28, 1929, the following officers were elected to serve for 1929-30: president, Mrs. C. A. Orr; first vice-president, Mrs. James O. Wallace; second vice-president, Mrs. James S. Hammers; recording secretary, Mrs. Stanley Wallace; corresponding secretary, Mrs. David B. Ludwig; and treasurer, Mrs. Homer W. Grimm. Our State president, Mrs. Charles B. Forcey, was present and expressed her appreciation of the work done by Allegheny County women with regard to the periodic health examination project. The annual meeting was a beautiful one, bringing to a successful close a most satisfactory year's work.

MARGARET O. (MRS. DAVID B.) LUDWIG,
Corresponding Secretary.

Beaver. The membership numbers sixty-seven. Four meetings were held during the year, with an average attendance of about thirty-five. The constitution was amended to hold bimonthly meetings, with stated meetings of the Board every second month. Contributions were as follows: Medical Benevolence Fund, $200; Passavant Home for Epileptics, $100. This year our auxiliary has the distinction of providing the State Auxiliary president and corresponding secretary. Upon request by the auxiliary the president of the Berks County Medical Society has appointed an Advisory Board, consisting of three members of the society.

MRS. B. C. PAINTER, *President.*
MRS. IRA DUNCAN, *Delegate.*

Bucks. The membership numbers seventeen for 1929. Two regular meetings were held coincident with meetings of the Bucks County Medical Society—the November, 1928, meeting, held at Doylestown in celebration of the eightieth anniversary of the society; and the May meeting held at Bristol. No important business was transacted.

JULIA H. SLACK, *Secretary.*

Butler. This auxiliary has an active membership of twenty-eight, with twenty-two paid memberships to date.

This past year a Christmas party was held at the hospital, when lighted trees were placed in the wards and each child was given a gift. In October, cakes were provided for the nurses' ball, given in honor of the graduating class of our hospital.

We contributed to the Medical Benevolence Fund $25, paid a State tax of $22, and received from *Hygeia* subscriptions $54.50. The remainder of our money will be used for some much-needed silver in the hospital.

Mrs. R. H. Walker was appointed delegate to the State meeting at Erie, and Mrs. L. R. Hazlett as alternate.

MRS. GUY A. BRANDBERG, *President.*

Cambria. The regular monthly meetings were held the second Thursday of each month, beginning August, 1928, which meeting was held at the Cresson Sanitarium and the following officers were elected at that time: president, Mrs. Robert Palmer; first vice-president, Mrs. J. J. Meyer; second vice-president, Mrs. J. W. Barr; secretary, Mrs. C. M. Harris; treasurer, Mrs. Arthur Miltenberger. At each meeting a short business session was conducted, with bridge following.

The January meeting was held at the Capital Hotel, in Johnstown. At the February meeting, held at the Fort Stanwix Hotel, Miss Katherine A. Pritchett, of the State Welfare Department, gave a splendid address on "Recent Discoveries in Nutrition." The March and April meetings were both short business sessions. Mrs. J. J. Meyer, the district councilor for the eleventh district, called a meeting in May, inviting delegates from each of the six counties of the eleventh district. Only one county was represented. Mrs. J. I. Johnston, the State district councilor, attended. Following the meeting, a luncheon was served at the Capital Hotel. No meetings were held during June and July.

MRS. W. E. GROVE, *Secretary.*

Chester. Four meetings were held during the past year. We have increased our membership, contributed $5 to the Health and Welfare Council, urged preschool health examinations, gave $25 to the Medical Benevolence Fund, and each member was requested to have a periodic health examination.

MRS. I. P. P. HOLLINGSWORTH, *President.*

Clinton. This auxiliary has a membership of fifteen, with five paid members. Five dollars was contributed to the Medical Benevolence Fund. A meeting was held August 17th at the home of the president, Mrs. James L. Lubrecht, with four members present, and Mrs. Edward Lyon and Dr. W. S. Brenholtz, of Williamsport, as guests. Mrs. David W. Thomas was elected as a delegate to the State meeting at Erie, with Mrs. W. J. Shoemaker as alternate.

MRS. DAVID W. THOMAS, *Delegate.*

Dauphin. Our auxiliary is in a most healthy, and vigorous condition, with an increase in membership of more than one hundred per cent. The meetings were held monthly instead of quarterly, and comprised an educational as well as a social program.

It has been our policy at each meeting to have as our guests members of some of the other auxiliaries. Twice during the year we had with us our State president, Mrs. Forcey, the president-elect, Mrs. Freeman, and a large number of the Executive Board members, also guests from Chambersburg, Waynesboro, Altoona, and other places.

There are nine standing committees all functioning splendidly, but I should like to describe the work of one which is especially interesting—the Welfare Committee. A short distance out of Harrisburg is located a camp for undernourished children, kept up during most of the summer months by the proceeds from the sale of Christmas seals. Under the direction of the Welfare Committee the members of our auxiliary dressed dolls for each of the girls as they came to camp, and purchased a toy aëroplane for the boys, besides sending cakes, jellies, and ice cream to the camp at different times. One day each week an enjoyable party was staged for the little folks. The work was entirely new this year, but we hope to do much more next summer.

The proceeds of $300 from a novel birthday party and a successful card party were sent to the Medical Benevolence Fund. During September a rummage sale was held, from which we cleared $170. This will be used in charitable work at Christmas.

Half or possibly more of our members have had the periodic health examination. Our members are most enthusiastic, and we have great hopes for the coming year.

I feel that this report is not complete without a tribute to the splendid leadership of our president, Mrs. Phillips.

MRS. J. W. SHAFFER, *Treasurer.*

Erie. A request was made that no more meetings than necessary be held, so only six auxiliary meetings occurred, although there were many board and special committee meetings. Our membership totals seventy-eight paid members. We are free of debt, and have at present $443.59 in the treasury. At a tea given, with

Mrs. Forcey, the State president, as our guest, we raised $78, which was contributed to the Medical Benevolence Fund. Miss Katherine A. Pritchett, of the State Welfare Department, gave a very interesting lecture on nutrition at our February meeting, which was well attended by the members and a few of the public.

We have tried to do the work this past year laid out for us by the State Auxiliary Board, but necessarily most of our energies have been expended upon preparations for the entertainment of our guests at the convention. We hope our efforts have met with as great success as those of preceding years.

CLARA W. (MRS. C. G.) STRICKLAND, *President.*

Fayette. This auxiliary completed its fourth year with fifty-one active and eight honorary members.

Eight regular meetings, four executive meetings, and one public meeting were held. Interesting and instructive speakers were heard at each meeting. A paper on the merits of *Hygeia* was presented to some nine hundred Fayette County teachers. Many hundreds of signatures protesting the Chiropractic Bill were secured and sent to Dr. Correll. Delegates were sent to the State convention held at Allentown, and fifteen subscriptions to *Hygeia* were received.

We sold $254.24 worth of Christmas seals, and purchased a $10 Health Bond. We also contributed $5 to the Salvation Army, $100 to the School Fund to purchase glasses for poor children, and $150 to the Medical Benevolence Fund. An amount of $94.14 was expended in outfitting children at the Cresson Tuberculosis Sanatorium, and a large quantity of second-hand clothing was collected and distributed through the Tuberculosis Society to needy families.

CHARLOTTE (MRS. D. C.) FOSSELMAN, *Secretary.*

Lackawanna. We organized three years ago with less than fifty members; now we have a membership of 105. Four regular meetings were held, and special meetings when necessary. Many of our members subscribe to *Hygeia.* We have contributed to the Medical Benevolence Fund $182 this past year, the proceeds of many parties.

An Educational Committee has been added, and our aim is to invite able men and women of the medical profession to speak to us on matters that will enable us to carry on our work more intelligently.

Very little has been done regarding periodic health examinations, but I feel certain that by the time of our next State convention most of our members will have been examined.

MERCEDES WATKINS (MRS. U. P.) HORGER, *Delegate.*

Lancaster. We have just completed our first year, and have fifty-seven members. Meetings were held each month with good attendance. Mrs. J. Newton Hunsberger, of Norristown, gave an interesting talk at the February meeting. From the proceeds of a card party, $100 was contributed to the Medical Benevolence Fund, and $50 to the Medical Club of Lancaster.

This auxiliary secured 1,000 signatures on petitions sent out by Dr. Correll asking that no change be made in the present Medical Practice Act.

Our contribution to the May Day program was a public meeting, to which all the Well Baby Clinics in Lancaster County were specially invited. Health pictures were shown, and Dr. J. Bruce McCreary, Deputy Secretary of Health of Pennsylvania, was the speaker. A number of the auxiliary members assisted the doctors in health examinations of preschool children.

MARY CALDER (MRS. T. B.) APPEL, *President.*

Lebanon. Regular meetings were held on the second Monday of each month. Two new members were admitted to the auxiliary, making a total of twenty-two members.

Very interesting details of the State convention at Allentown last year were described by our president and delegate to this meeting.

Fourteen new subscriptions to *Hygeia* were secured, and the magazine was placed in the Community Library and the Mizpah Faith Home for Children. At Christmas, each child and mother of the Home was given a dollar as a gift from the auxiliary. Baby dresses and diapers were made and donated to the Visiting Nurses' Association and Associated Charities.

At one of our meetings Miss Pritchett, of the State Welfare Department, gave an interesting talk on nutrition, and Mrs. Weimer, of the Lebanon Child Health Clinic, briefly outlined the work of the clinic. Films entitled "Too Many Pounds" and "Preventing Diphtheria" were obtained from the State Health Department and shown in the Lebanon theaters during Child Health Week, May 1st to 7th. The Tricounty Society, comprising Dauphin, Lancaster, and Lebanon counties, was entertained at the Lebanon Country Club in June, and bridge, golf, and a dinner were enjoyed by the members and their wives.

ETHYL G. (MRS. IRWIN) LAPE, *Secretary.*

Lehigh. The auxiliary has an enrollment of ninety-nine members and one honorary member.

During the year the regular business meetings and several social affairs were held. A Fastnacht Social for members and their guests was given, and at the March 12th meeting the treasurer reported a balance on hand of $1,817.67, after all bills were paid. The annual outing was enjoyed at Ye Old Country Club with a bridge luncheon. The April 27th card party, held at the Woman's Club, netted an amount of $184.50.

We invested $1,000 in a bond of the Americus Hotel, and $500 in U. S. Government bonds. A check for $100 was sent to the Medical Benevolence Fund, and each hospital was sent $25, also Christmas baskets and groceries.

The *Hygeia* chairman reports fifty-one families taking *Hygeia.*

LILLIAN S. (MRS. W. C.) TROXELL, *President.*

Lycoming. We are finishing our fifth year with a membership of sixty, seven members having been received at the September meeting.

Regular monthly meetings were held, with a luncheon preceding each meeting. One meeting adjourned to join the Lycoming County Medical Society in unveiling a memorial tablet to the physicians of the County Society who served in the World War. Periodic-health-examination blanks were distributed to each member during the past year. A bronze tablet was placed by the auxiliary on the door of the refurnished surgical ward of the Williamsport Hospital in memory of Mrs. A. F. Hardt, president of the auxiliary at the time of her death. We coöperated with the County Medical Society in planning and financing a public-health meeting, which was addressed by Dr. Morris Fishbein, editor of the *Journal of the American Medical Association,* of Chicago, Ill. A dinner in honor of Dr. and Mrs. Fishbein preceded the meeting.

We have edited an "Auxiliary" page each month since January in the *Medical Bulletin*—the official publication of the Lycoming County Medical Society.

Our receipts and disbursements are as follows:

Receipts

Dues	$114.00
Annual dance	356.50
Card party	106.90
Small dance	125.00
Gift from a member	100.00

Disbursements

Dues to State Auxiliary	$50.00
Health Bond	5.00
Health meeting	50.00
Medical Benevolence Fund	100.00
Muncy Valley Hospital	125.00
Refurnishing surgical ward in Williamsport Hospital	300.00

Florence S. (Mrs. Edward) Lyon, *Secretary.*

Montgomery. Four regular meetings and three Executive Board meetings have been held during the year. Dr. Orlando H. Petty was the speaker at our first meeting, and gave a very interesting war talk. Our fourth annual meeting was held February 29th, which was a luncheon followed by bridge and addresses by Mrs. Walter Jackson Freeman and Dr. Edgar S. Buyers on pending medical legislation. At the May 1st meeting, held at the Nurses' Home of the Pottstown Hospital, Pottstown, the graded-school pupils of the town presented a health play entitled "An Abused Little Stomach," and the child-health program was discussed.

During the Child Health Week, about 250 preschool-age children were examined at public clinics, and health films were shown in the local theaters. All local newspapers gave their coöperation, as well as the County Tuberculosis Society.

At the September 4th meeting delegates were appointed to the State meeting at Erie. At the Executive Board meeting thirty-seven names were reported as having periodic health examinations. The annual picnic was held June 19th. On September 12th the auxiliary attended the meeting of the Second Councilor District at Valley Forge, in conjunction with the County Medical Society meeting, Dr. William T. Sharpless, Mrs. Walter Jackson Freeman, and Mrs. William E. Parke being the speakers.

From the proceeds of parties and social gatherings, $100 was contributed to the Medical Benevolence Fund. It is planned to raise more money for the worthy cause this year.

Our membership totals fifty-eight, with the loss of one member, Mrs. Watson, during the year.

Our auxiliary feels highly honored in having one of our members, Mrs. J. Newton Hunsberger, president-elect of the Woman's Auxiliary to the American Medical Association. We wish her success in her new office!

Mrs. J. Elmer Gotwals, *Delegate.*

Northampton. The auxiliary, while still in its infancy, shows evidences of a future healthy growth. Our membership of 37 is active, with a possible membership of 150 available, providing all members of the physicians' families in this county can be interested.

Monthly meetings have been held throughout the year, with the exception of the summer months, each meeting being followed by a social session of some nature, enabling the members to become better acquainted and thus creating a desire for nonmembers to become members.

Philadelphia. The fall and winter of 1928-29 were anxious weeks for the medical profession in this State, and our Legislative Committee under its faithful chairman, Mrs. Samuel Bolton, was called upon for much extensive work. Two meetings were devoted to legislative subjects; resolutions were passed and petitions circulated, as requested by the State Society officers.

The *Hygeia* Committee, under Mrs. William E. Parke, was quite busy with the ambitious project of offering five-months' trial subscriptions to *Hygeia* to various organizations strategically placed in senior and junior high schools, and seventeen Health Centers, Y. M. C. A., and Y. W. C. A., libraries, and women's rest rooms in shops and factories.

The Membership Committee, with Mrs. Sturtevant as chairman, brought in forty-three new members.

At the January 15th meeting Dr. Petty and Mrs. Forcey, our State Auxiliary president, spoke, stressing the importance of periodic health examinations and the support of the Medical Benevolence Fund, and urging us to make a special feature of Health Week. In response to her request, Mrs. Louis Lehrfeld, chairman of the Committee on Public Health, arranged two meetings with health movies and addresses by eminent speakers.

Mrs. Theodore B. Appel, president of the Lancaster County auxiliary, and twenty of their members were our guests at the March 19th meeting, when Dr. Edward H. Hume, formerly president of Yale in China, spoke on "Medicine Old and New in China." Two other interesting speakers addressed meetings during the year, Dr. Edwin B. Twitmyer and Dr. Seneca Egbert. We have also enjoyed occasional programs of music and readings at our teas, and have had a pleasant and profitable year.

Anna Parsons (Mrs. Leighton F.) Appleman, *Alternate Delegate.*

Potter. We have a membership of eight; contributed $8 to the Medical Benevolence Fund; and secured ten subscriptions to *Hygeia.*

We coöperated with the County Medical Society in arranging a farewell dinner in December for Dr. and Mrs. Ashcraft, of Coudersport, on the eve of their departure for Florida. Dr. Ashcraft being the oldest member, the Society wished to honor him.

Our annual meeting was held in conjunction with the County Medical Society at Hunting Valley Inn, Gaines, Pa., with the Tioga Medical Society members and their wives as our guests. Mrs. Edward Lyon and Mrs. Walter S. Brenholtz were guests of honor at this meeting, and Mrs. Lyon talked to the Tioga County women, urging them to organize an auxiliary. An enjoyable and profitable afternoon was spent.

Mrs. J. H. Page, *President.*

Washington. Meetings were held every two months, beginning with October and closing in June. The Executive Board met on alternating months, a month preceding each auxiliary meeting.

The October meeting was unique in that it was held outside the county seat, at Hickory, and members from McDonald, Burgettstown, and Hickory were in entire charge of the program and the social hour. This meeting was so well attended and thoroughly enjoyed that a similar out-of-Washington meeting is being planned by the new program committee, of which Mrs. W. A. LaRoss, of McDonald, is chairman.

A joint banquet of the County Medical Society and the auxiliary, held December 12th, was a real family Christmas dinner with 100 in attendance, including old Saint Nick, who had an appropriate gift for each one present. Fine music, a snappy farce by a class in

dramatic art from Washington and Jefferson College, Yuletide decorations, favors, and spirit made this a never-to-be-forgotten event.

The April meeting was an open meeting arranged by the Public Health Committee, Mrs. Clarence McCullough, chairman. A number of public health and welfare workers and members of Mothers' Clubs were present. Dr. Mary Riggs Noble, of Harrisburg, spoke upon Child Health Clinics, and Miss Troxell, superintendent of nurses of the Washington Hospital, showed and explained a film entitled "Policing the Mouth."

Among other outstanding program features for the year were: dramatic acts by groups of student nurses, including one on first aid; a fine paper on "Recent Developments in Psychology" by Mrs. Edward Weyer, wife of Dr. Weyer of the Washington and Jefferson faculty; readings and violin and piano solos by daughters of doctors, as well as fine musical numbers by the wives of doctors who are members of the auxiliary.

A surprise luncheon given by the Executive Committee in April in honor of the out-going president, Mrs. G. W. Ramsey, and a porch party in June, with over thirty present, were also delightful events of the year.

We contributed $30 to the Medical Benevolence Fund. Periodic-health-examination blanks were given to all members, but only ten per cent so far have reported examinations made. A number, however, have reported examinations almost completed.

At present, forty members are on our active list, thirty-seven of whom have paid dues during the past year.

The new Executive Committee met September 27th at the home of the president, Mrs. A. W. Hopper. The fine interest shown predicts a good year to come for the Washington Auxiliary.

MRS. WILLIAM R. DICKSON, *Delegate.*

Westmoreland. During the year twelve subscriptions to *Hygeia* were secured, and a commission of $8.50 received. A contribution of $100 was sent to the Medical Benevolence Fund.

Monthly meetings were held and reports of activities mailed to the PENNSYLVANIA MEDICAL JOURNAL.

Several hundred copies of "Danger Ahead" were distributed, and many petitions regarding the Chiropractic Bill were filled out and properly submitted to Dr. Correll.

At our March meeting the officers for the ensuing year were elected, followed by a bridge luncheon with our district councilor, Mrs. J. I. Johnston, as guest of honor. The fourth annual banquet was held in May with sixty-three members and three hospital superintendents present. A musical and dramatic program followed the banquet. When the County Medical Society held their annual clinic in May, tea was served by the auxiliary.

Dues received during the year amounted to $147. Proceeds from a rummage sale held in October netted $81.96.

Gingham dresses for the children's ward of the Westmoreland Hospital were made and donated during the year.

Plans are now being formed for our first benefit card party.

MRS. H. H. HAMMAN AND MRS. J. F. TRIMBLE,
Delegates.

Medical News

Erratum

IN THE NOVEMBER JOURNAL we published a notice of the death of Dr. Mabel H. Pearson. A letter from Dr. Pearson advises us that she is in good health and living at present at Galen Hall, Atlantic City, N. J. We regret exceedingly that this mistake occurred owing to misinformation received at the JOURNAL office.

Deaths

MRS. CLARA ANN WALLACE, wife of Dr. Nathan C. Wallace, of Dover; aged 66; August 30.

FRANK S. ULLOM, M.D., of Waynesburg; Jefferson Medical College, 1903; aged 51; October 29.

J. HARVEY MILLER, M.D., of Harrisburg; Jefferson Medical College, 1896; aged 62; November 23.

JAMES G. ALLISON, M.D., of Ford City; Baltimore Medical College, 1895; aged 62; October 2.

MRS. MARY HELEN KENNEDY, wife of Dr. Eugene T. Kennedy, of Philadelphia; aged 25; October 14.

GEORGE R. CONGER, M.D., of Taylorstown; University of Pittsburgh School of Medicine, 1892; aged 64; in November.

J. C. WINTERSTEEN, M.D., of Bloomsburg; Jefferson Medical College, 1886; aged 67; November 11, from heart disease.

ELMER C. MILLER, M.D., of Bangor; Jefferson Medical College, 1892; practitioner of medicine for thirty-one years; aged 61; November 18.

RICHARD L. MCDONALD, M.D., of Mahanoy City; Maryland Medical College, Baltimore, 1912; aged 40; August 24, following an operation.

B. STEWART RALSTON, M.D., of Pittsburgh; University of Pittsburgh School of Medicine, 1889; aged 63; October 24, of cerebral hemorrhage.

VICTOR C. WAGNER, M.D., of New Castle; Jefferson Medical College, 1905; aged 47; August 24, at St. Francis Hospital, Pittsburgh, of acute encephalitis.

PHILIP J. SOHN, M.D., of Ambridge; University of Pittsburgh School of Medicine, 1897; aged 61; August 10, of chronic hypertension and nephritis.

DAVID P. JACKSON, M.D., of Sharon; Miami Medical College, Cincinnati, 1874; aged 78; September 7, at the Buhl Hospital, of carcinoma of the esophagus.

DELLA H. WILLIAMS, M.D., of Berwyn; Woman's Medical College, 1909; member of the staff of the West Philadelphia Hospital for Women; aged 54; October 31, of heart disease.

SAMUEL S. STRYKER, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1866; aged 86; October 25, at the Presbyterian Hospital, after an illness of five weeks.

WILLIAM H. SHANE, M.D., of Philadelphia; Cleveland University of Medicine and Surgery (Ohio), 1890; member of the staff of Hahnemann Hospital; aged 66; November 12, after a brief illness.

RAYMOND L. SOMERS, M.D., of Philadelphia; Jefferson Medical College, 1917; affiliated with several Philadelphia hospitals; veteran of the World War; aged 38; October 28, after a brief illness.

MRS. HAYES, wife of Dr. R. B. Hayes, of Jersey Shore, died following an operation the early part of October. Mrs. Hayes was a charter member and very active in the affairs of the Woman's Auxiliary to the Lycoming County Medical Society.

HARLAND C. NICHOLSON, M.D., of Ardmore; Hahnemann Medical College and Hospital, 1904; until a few years ago associated with the Hahnemann Hospital

staff, and later engaged in special clinical work at the Jefferson Hospital; aged 52; October 20, following a sudden heart attack which climaxed an illness of more than a year.

VICTOR J. GANGEWERE, M.D., of Allentown; Medico-Chirurgical College, 1907; on the medical staff of the Allentown Hospital and an associate member of the staff of the Sacred Heart Hospital; always active in any movement for the welfare of the community; aged 49; November 13, from an apoplectic stroke.

SARAH HUNT LOCKREY, M.D., of Philadelphia; Woman's Medical College, 1888; one of the oldest members of the staff of the Woman's Hospital; on the staff of the West Philadelphia Hospital for Women; member of the American College of Surgeons; consultant at the Elwyn Training School and founder of the women's clinic at the Methodist Deaconess Home; active for many years in movements for the advancement of women in the medical profession and also active as a suffragist; aged 66; November 8, after an illness of five months.

Births

To DR. AND MRS. M. D. RHOADES, of Conemaugh, a son, October 4.

To DR. AND MRS. HAMBLEN C. EATON, of Warren, a son, David Charles, early in November.

To DR. AND MRS. WILLIAM J. BASLER, of West Leesport, a daughter, Patricia Tegge, November 4.

Engagements

MISS ETHEL B. MARKLEY, daughter of Dr. and Mrs. J. M. Markley, of Schwenksville, and Dr. Albert G. Gibbs, of Nanticoke.

MISS EMMA COOLIDGE PAINTER, of Wayne, and Mr. Donald Stuart Hoffman, son of Dr. and Mrs. Romaine C. Hoffman, of Narberth.

MISS CELIA BELDEN MARSHALL, daughter of Dr. and Mrs. George M. Marshall, of Philadelphia, and Mr. Robert A. Darrah Miller, also of Philadelphia.

Marriages

DR. SARA E. MAULE, of Norristown, to Judge J. Burnett Holland, November 8.

MISS HELEN M. MARCUS, to Dr. Bernard Mann, both of Philadelphia, November 17.

DR. EDITH MACBRIDE, of Sharon, to Mr. Allen Tyler Dexter, of Cleveland, Ohio, November 16.

MISS SARAH MARGARET SISSIONS, of Erie, to Dr. William Forrest West, Jr., of Philadelphia, September 10.

MISS VIRGINIA FOGG BIRD, daughter of Dr. G. C. Bird, to Mr. Frederick F. Flood, Jr., October 28, all of Philadelphia.

MISS ANNA M. HOTTENSTEIN, daughter of Dr. and Mrs. Peter Hottenstein, to Mr. Richard Montgomery, all of Philadelphia, November 6.

MISS DORIS ELIZABETH GASKILL, daughter of Dr. Henry Kennedy Gaskill, of Melrose Park, to Mr. Robert Teal Seeley, of Philadelphia, November 14.

MISS FLORENCE ANNA FLYNN, daughter of Dr. J. Cajetan Flynn, of Philadelphia, to Dr. Edward T. McNicholas, November 27. Dr. McNicholas was graduated from Jefferson Medical College this year.

Miscellaneous

DR. PETER C. REILLY, of Williamsport, is recovering from a serious illness.

DR. AND MRS. J. F. BUZZARD, of Portage, have returned from a vacation in Europe.

DR. ERNEST J. COWDEN, of North Warren, who has been in poor health, is reported as improved.

AT THE NOVEMBER ELECTION Dr. Charles L. Youngman, of Williamsport, was elected coroner.

DR. G. C. BIRD has resigned from the chair of roentgenology, Temple University Medical School.

DR. LEROY E. CHAPMAN, of Warren, was reëlected to the office of burgess at the November election.

DR. JAMES R. HART, of Erie, has returned home after taking a postgraduate course in surgery at the European clinics.

DR. WILLIAM S. PIPER, of Clearfield, is in Philadelphia taking postgraduate work at the Jackson Bronchoscopic Clinic.

DR. RUSSELL S. BOLES, of Philadelphia, has been appointed visiting physician to the Philadelphia General Hospital.

DR. AND MRS. J. MADISON TAYLOR, of Philadelphia, entertained at dinner, November 2, to celebrate their fiftieth wedding anniversary.

DR. MARTIN F. KOCEVAR, of Steelton, is touring Europe at present and plans to take some special courses at the University of Vienna Hospital.

DR. R. F. OTTERBEIN, of Warren, has been given charge of the pathologic and diagnostic laboratory and x-ray department of the Warren General Hospital.

DR. I. H. HARTMAN, of Reading, has returned to active duty following a period of illness, during which time he was a patient at the Reading Hospital.

DR. S. LEON GANS was reëlected president of the Physicians Motor Club of Philadelphia at its annual meeting in the Bellevue-Stratford, November 12.

BRIGADIER GENERAL FRANK R. KEEFER of the medical corps of the United States Army, a Pennsylvanian, was retired from active service on account of age, October 10, 1929.

DR. LEOPOLD VACCARO, of Philadelphia, resigned on November 12, as assistant immunologist in the Department of Health and as a member of the staff of the Philadelphia General Hospital.

DR. STEPHEN MUNRO SMITH, formerly assistant medical director of the Philadelphia Hospital for Mental Diseases, is now associated with the Milwaukee Sanitarium, Wauwatosa, Wisconsin.

THE PHILADELPHIA HOME FOR INCURABLES will receive the greater part of the $40,000 estate of James Y. Heckman, Philadelphia, who died October 22. The Reading Hospital will receive $5,000.

SENATOR-ELECT VARE, of Philadelphia, has purchased the spacious country estate of his brother, the late Senator Vare, at Ambler, which he will give to the city as a hospital for paralytic patients. The building is old English in style.

THE ONE HUNDREDTH ANNIVERSARY of the birth of Dr. S. Weir Mitchell was commemorated, November 6, at the College of Physicians of Philadelphia by an address by Dr. Frederick Tilney, of New York, on "Structural Basis of Behaviorism."

DR. RICHARD F. DAVIS, of Philadelphia, was the only physician to qualify before the Civil Service Commission for appointment as assistant resident physician, Bureau of Hospitals. The position pays a salary of $2,000 a year and maintenance.

DR. EDWARD W. BEACH, of Philadelphia, was elected president of the Eastern Society of Anesthetists at the annual meeting in Chicago. Dr. Beach is connected with the staffs of the Graduate Hospital of the University of Pennsylvania and the Howard Hospital.

GOVERNOR FISHER announced on October 31 that George B. Webster and Summer B. Ely had resigned,

without stating reasons therefor, from the State Sanitary Water Board, and that he had appointed Dr. J. Norman Henry, Philadelphia, and Elmer A. Holbrook, Pittsburgh, as their successors.

THE MUTTER LECTURE FOR 1929 was delivered in Mitchell Hall of the College of Physicians, Philadelphia, on December 4, by Dr. Robert B. Greenough of Boston, assistant professor of surgery at Harvard University Medical School. His subject was "The Surgeon and Cancer."

AT THE MEETING of the American College of Surgeons during October, Dr. C. Jeff Miller, of New Orleans, was chosen president for 1930-31. He will succeed Major General Merritte W. Ireland, who becomes active president with the retirement of Dr. Franklin H. Martin, of Chicago.

THE TRUSTEES OF THE ALLENTOWN STATE HOSPITAL had as their guests at the thirteenth annual inspection and opening of the new children's building, November 13, the members of the Lehigh, Northampton, and Bucks County Medical Societies and the Lehigh Valley Homeopathic Society.

A CAMPAIGN was launched in Chicago, November 15, to establish the Du Page Hospital at a cost of $500,000. The new hospital is to be owned and controlled by a hospital association of those who help to establish it, and is expected to serve especially the family of moderate means.

THE CAROLINE INSTITUTE OF STOCKHOLM has announced that the Nobel Prize in medicine for 1929 has been divided between Dr. Frederick Gowland Hopkins, professor of biochemistry at the University of Cambridge, England, and Dr. C. Eijkmann, a professor at the University of Utrecht, Holland.

DR. ERNEST FUCHS, seventy-nine-year-old professor emeritus of ophthalmology at the University of Vienna, Austria, has been awarded the Leslie Dana Medal for 1929 "in recognition of the most outstanding achievement in the prevention of blindness and the conservation of vision."

THE FORTY-THIRD annual dinner of the Association of Ex-Resident and Resident Physicians of the Philadelphia General Hospital was held at the Penn Athletic Club on December 3. The dinner was in the form of a testimonial to Dr. Barton Cooke Hirst, emeritus professor of obstetrics at the University of Pennsylvania.

THE GROSS LECTURE of the Philadelphia Pathological Society was delivered, November 14, by Dr. Eugene L. Opie, professor of pathology, University of Pennsylvania, on "The Occurrence and Spread of Tuberculous Infections." The William Wood Gerhart Gold Medal of the Philadelphia Pathological Society was awarded to Dr. Opie.

DR. JAMES P. SANDS has been appointed superintendent of the Philadelphia Hospital for Mental Diseases at Byberry to take the place of Dr. Everett Sperry Barr, who resigned to take charge of the Chester County Hospital at West Chester. He has been given authority to select his own assistant in place of Dr. Stephen L. M. Smith, who also resigned.

AT THE MEETING of the Section on Public Health and Industrial Medicine of the College of Physicians of Philadelphia, held November 22, Dr. Arthur P. Hitchens, Major, M. C., U. S. A., delivered an address on "Public Health in the Philippine Islands with Special Reference to the Management of Leprosy." A testimonial dinner was given for Major Hitchens.

DR. GEORGE M. DORRANCE, of Philadelphia, has been awarded the Alvarenga Prize for 1929 for his essay entitled "Congenital Insufficiency of the Palate." The next award of the prize will be made on July 14, 1930. Further information in regard to the contest may be obtained from Dr. John H. Girvin, Secretary, College of Physicians of Philadelphia, 19 South 22d Street.

THE EAGLEVILLE SANATORIUM, EAGLEVILLE, celebrated its twentieth aniversary, October 27. In addition to the sanatorium activities at Eagleville, the organization runs a large dispensary for ambulatory tuberculosis patients at 1332 Fitzwater Street, Philadelphia. The first pneumothorax clinic in this State was started at the Eagleville dispensary.

A SHORT CIRCUIT in a panel switchboard in the laundry building started a fire at the State Hospital, Ashland, November 19, which resulted in about $1,000 damage. Two employees of the hospital were severely injured when a ladder from which they were fighting the fire broke, hurling them fifteen feet to the ground. None of the patients were disturbed by the fire.

DR. EDWARD JACKSON, of Denver, Colorado, was elected president of the Wills Hospital Society at its third annual meeting held at the Bellevue-Stratford, Philadelphia, October 25. The society is composed of ex-residents and surgeons of the Wills Hospital, organized for the purpose of furthering the interests of the institution, which next year will celebrate its 100th anniversary.

THE PHILADELPHIA COUNTY MEDICAL SOCIETY gave a dinner in its building at Twenty-first and Spruce Streets, Wednesday evening, November 13, to celebrate Armistice Night. The speakers were Surgeon Generals Merritte W. Ireland, Charles E. Riggs, and Hugh S. Cumming of the army, navy, and public health service respectively, and Rear Admiral Jules Latimer, commandant of the Philadelphia Navy Yard.

THE UNITED STATES CIVIL SERVICE COMMISSION announces the following open competitive examinations: senior medical officer (internal medicine), $4,600 a year; junior medical officer (intern), $2,000 a year. The examinations are to fill vacancies in Saint Elizabeth's Hospital, Washington, D. C., and vacancies occurring in positions requiring similar qualifications. Applications must be on file with the Secretary of the Fourth U. S. Civil Service District, Washington, D. C., not later than December 26.

THE TWENTIETH ANNIVERSARY of the inauguration of the mental-hygiene movement and the founding of the National Committee for Mental Hygiene was celebrated on Thursday evening, November 14, with a dinner at the Biltmore Hotel in New York City, attended by nearly 700 psychiatrists, psychologists, educators, social workers, and prominent laymen from various parts of the country, and presided over by Dr. William H. Welch, Director of the Department of the History of Medicine of Johns Hopkins University and honorary president of the National Committee.

THE ANNOUNCEMENT has been made of the retirement of George E. Vincent from the presidency of the Rockefeller Foundation. He has always been a faithful exponent of public health and preventive medicine, and is without a peer as a fearless public speaker, but withal enjoying a keen sense of humor. His release from administrative duties will afford him more time to extend his range of public speaking to the advantage of the communities wherein he may appear. Dr. Max Mason, skilled in scientific research and administrative experience, has been appointed his successor.

DR. GEORGE L. LAVERTY, of Harrisburg, was awarded the Seibert prize, November 19, at the annual banquet of the Harrisburg Academy of Medicine, held at the Penn-Harris Hotel. The award is given once in two years to the member of the Academy who, in the opinion of the committee, has been most active and zealous in the interest of his profession, the community, and the Academy. The prize is $500 and is to be used within the year of its presentation for study in the hospitals and medical centers of Europe. Captain Irving O'Hay, who has served in ten wars, was the speaker at the banquet.

THE ROCKEFELLER FOUNDATION has pledged $100,000 a year for ten years to develop a psychiatry program at

Yale University Medical School, and in addition has provided the funds for the Institute of Human Relations building now under construction, in which the new department will be housed. The Commonwealth Fund is making an annual allowance of $50,000 for the development of the mental-hygiene aspects of the program. Dr. Eugene Kahn, of Munich, Germany, has been appointed professor of psychiatry and mental hygiene in the Yale School of Medicine, and will have full charge of the department. The keynote of the work will be the prevention of mental disease by tracing its forms to the source.

The Medical Alumni of Temple University, Philadelphia, tendered a reception and dinner, November 23, at the Penn Athletic Club, in honor of the following recently elected members of the major faculty, and their wives: Dr. Matthew Ersner, professor of otology; Dr. Temple Fay, professor of neurosurgery; Dr. Chevalier Jackson, professor of bronchoscopy and esophagoscopy; Dr. Thos. Klein, professor of applied therapeutics; Dr. Alfred Livingstone, professor of pharmacology; Dr. William Pritchard, professor of histology; and Dr. Victor Robinson, New York City, professor of the history of medicine. Dr. Chevalier Jackson was the guest of honor.

A Pennsylvania division of the National Association Against the Prohibition Amendment was formed in Philadelphia, November 4. There will be a State Executive Committee of ten members. Every county in the Commonwealth is represented on the State board of directors. The object is to unite in an organized protest to Congress those citizens of Pennsylvania who reject national prohibition as unsound in principle and harmful in practice. The proponents propose to take the prohibition issue out of the hands of politicians and political parties or factions, and to give the thinking people of Pennsylvania the means of expressing themselves. The following physicians are on the board: Drs. John B. Deaver and Francis R. Packard, Philadelphia; Dr. J. M. Baldy, Devon; Dr. John D. Wilson, Scranton; Dr. James A. Lynch, Cresson; Dr. John L. Sagerson, Johnstown; Dr. J. M. Brockerhoff, Bellefonte; and Drs. Elmer Hess and G. C. Boughton, Erie.

The Speakers for the November health talks for the public conducted by the Philadelphia County Medical Society were as follows: Earl C. Rice, D.D.S., "Take Care of Your Teeth"; Dr. Thomas B. Holloway, "Practical Points on the Care of the Eyes"; Dr. Moses Behrend, "Indigestion." The following radio talks were given during the month: Dr. Louis Lehrfeld, "Injurious Play Toys"; Dr. John C. Siggins, "Color Blindness in Motorists"; and Dr. John H. Arnett, "Rheumatism and Arthritis." For December the health talks were as follows: December 3, "Relation of the Pharmacist to the Public," by Ambrose Hunsberger, Phar. D.; December 10, "Care of the Hair," by Dr. S. S. Greenbaum; and December 17, "Dietetics," by Dr. Gordon J. Saxon. The radio talks for the month were: December 3, "The Necessity for Periodic Health Examinations," by Dr. Edward Weiss; December 10, "The Care of the Mother After the Baby Arrives," by Dr. Clifford B. Lull; and December 17, "The Care of the Expectant Mother," by Dr. Charles S. Barnes.

Dr. Florence Rena Sabin, fellow of Johns Hopkins University, and member of the staff of the Rockefeller Institute for Medical Research, has been awarded the annual Achievement Award of $5,000 for the year 1928 by the *Pictorial Review*. This award, which is now in its seventh year, is made anually to the American woman, by birth or naturalization, who has made the most distinctive contribution of the preceding year to the fields of American art, science, or letters. Dr. Sabin was the first woman to be admitted and to graduate from Johns Hopkins Medical University, the first woman to be admitted as an intern in its Hospital, and the first woman to be a member of its staff. She was the first woman to be a member of the teaching staff of the Medical School of Johns Hopkins, where she was professor of histology. She was the first American woman to be admitted to European research laboratories, working side by side with men in Italy and in the laboratories of Leipzig and Heidelberg. She was the first and is yet the only woman to be made a member of our National Academy of Science, and was also the first woman to become a member of the Rockefeller Institute for Medical Research.

The State Executive Board issued an order that became effective January 1, 1929, reducing the salaries of all State hospital superintendents to $8,000 and maintenance. The boards of trustees and superintendents of the State Hospitals at Shamokin, Coaldale, and Ashland vigorously protested against the ruling, and have continuously objected to the ruling to the State officials. The trustees of these three institutions refused to obey the Executive Board's order for a reduction of the salaries, and paid the superintendents their original salaries until June 1. On that date the administration of all State funds was taken over by the Department of Revenue, and the State Department of Welfare refused to approve the requisition for the higher salary. The State Executive Board announced on October 31 that it would rescind its action in so far as the superintendents of these three institutions are concerned, and that their original salaries of $10,000 a year and maintenance would be restored. By this action of the Board the superintendents will be given their back pay at the $10,000 rate. It is further understood that when any of the three vacate their positions, their successors will be paid only $8,000, and maintenance. The superintendents involved are Drs. George W. Reese, Shamokin; E. E. Shifferstine, Coaldale; and H. D. Lindermuth, Ashland.

The following Pennsylvania Medical Reserve officers have been relieved from assignment and have been reassigned as indicated:

From 375th Medical Regiment to the 27th General Hospital: Col. Frederick A. Hartung, Pittsburgh; Lieut. Col. Thomas L. McCullough, Pittsburgh; Major Wm. D. Hunter, Monessen.

From 5d Hospital Center to 1st Hospital Center: Lieut. Col. Ralph S. Bromer, Lieut. Col. Claude P. Brown, Lieut. Col. Francis S. Ferris, Lieut. Col. John E. Medley, all of Philadelphia; Lieut. Col. John B. McCreary, Shippensburg; and Major Harry Gallagher, Chester.

From 8th Medical Supply Depot to 9th Medical Supply Depot: Major John V. Allen, Philadelphia.

From 60th Station Hospital to 50th Station Hospital: Lieut. Col. Thomas W. Grayson, Pittsburgh; Major Joseph D. Farrar, Philadelphia; and Major Harvey W. Woods, Blain.

From 34th Evacuation Hospital to 32d Evacuation Hospital: Lieut. Col. W. Wayne Babcock, Major Aaron L. Bishop, and Major Bernard B. Neubauer, all of Philadelphia; Major DeForrest Ballou, Jr., Cynwyd.

From 37th Evacuation Hospital to the 20th General Hospital: Col. Wm. Bates, Lieut. Col. Geo. M. Piersol, Major Basil R. Beltran, Major George M. Purves, Major Anthony S. Giordano, Major Henry H. Hibsman, and Capt. Walter L. Cariss, all of Philadelphia; Major John S. Eynon, Chester.

From 365th Medical Regiment to 38th General Hospital: Major John W. Mann, Williamsport.

Lieut. Col. Leonard D. Frescoln, Philadelphia, has been relieved from assignment to the 365th Medical Regiment and reassigned to the 52d Station Hospital as Commanding Officer.

Major George O. O. Santee, Cressona, has been relieved from assignment to the 365th Medical Regiment and reassigned to the 34th General Hospital as Chief of Medical Service.

Major John C. Sullivan, Dubois, has been relieved from assignment to the 20th Surgical Hospital and reassigned to the 8th Surgical Hospital as Chief of Service and Chief Operating Surgeon.

CAPT. WILLIAM H. KELSEA, East Brady, has been relieved from assignment to the 11th Hospital Train and reassigned to the 3d Hospital Train as Commanding Officer.

MAJOR ALANSON F. B. MORRIS, Pittsburgh, has been relieved from assignment to the 70th Hospital Train and reassigned to the 48th Station Hospital as Chief of Medical Service.

CAPT. FRANK D. CAMPBELL, Bessemer, has been relieved from assignment to the 70th Hospital Train and assigned to the 3d Hospital Train as Chief of Surgical Service.

MAJOR VINCENT M. DIODATI, Philadelphia, has been relieved from assignment to the 8th Medical Supply Depot and reassigned to the 85th General Hospital as Chief of Medical Service.

MAJOR KARL REEVES, Pittsburgh, has been relieved from assignment to the 33d Hospital Train and reassigned to the 7th Station Hospital as Chief of Medical Service.

MAJOR ROY E. SLEPPY, Pittsburgh, has been relieved from assignment to the 36th Hospital Train and reassigned to the 47th Station Hospital as Chief of Medical Service.

LIEUT. COL. DAVID RIESMAN, Philadelphia, has been relieved from assignment to the 3d Hospital Center and reassigned to the 85th General Hospital as Chief of Medical Service.

LIEUT. COL. WILLIAM G. TURNBULL, Philadelphia, has been relieved from assignment to the 2d Hospital Center and reassigned to the 38th General Hospital as Chief of Medical Service.

BOOK REVIEWS

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

THE SURGICAL CLINICS OF NORTH AMERICA. Volume 9, number 5 (Philadelphia Number—October, 1929). 299 pages, with 111 illustrations. Per Clinic year, paper $12; cloth, $16. Philadelphia and London: W. B. Saunders Company.

In a book so filled with constructive papers derived from clinics of some of the foremost surgeons and their associates in Philadelphia, it is most difficult to single out any individual effort. Without at all detracting from the attractiveness of any one clinic, the outstanding references are those of the relationship of the pyloric sphincter to peptic ulcer, an operation still on trial; the carotid-jugular anastomoses; that performed for tuberculosis of the lungs being a little more theoretical than practical; and primary closure of the wound of compound fractures. The latter procedure should have a more universal application. Failure to do this can usually be traced to improper instruction of the intern on accident duty.

DISEASES OF THE CHEST AND THE PRINCIPLES OF PHYSICAL DIAGNOSIS. By George W. Norris, M.D., Professor of Clinical Medicine in the University of Pennsylvania; and Henry R. M. Landis, M.D., Professor of Clinical Medicine, University of Pennsylvania, and Director of the Clinical and Sociological Departments of the Henry Phipps Institute of the University of Pennsylvania; with a chapter on the Transmission of Sounds Through the Chest, by Charles M. Montgomery, M.D., and a chapter on the Electrocardiograph in Heart Disease, by Edward Krumbhaar, Ph.D., M.D. Fourth edition, revised. 954 pages with 478 illustrations. Philadelphia and London: W. B. Saunders Company, 1929. Cloth, $10 net.

On the wall of the beautiful reception room of the recently dedicated William H. Welch Medical Library, of the Johns Hopkins University and Medical School, one may read the following quotation from Milton: "For books are not absolutely dead things but do contain a potency of life in them to be as active as that soul was whose progeny they are. Nay they do preserve, as in a vial, the purest efficacy and extraction of that living intellect that bred them."

The present reviewer of the fourth edition of that excellent treatise, "Diseases of the Chest and the Principles of Physical Diagnosis," by Norris and Landis, was reminded of Milton's lines by this good book. He remembers with pleasure, and a deep sense of gratitude to the authors and their coworkers, how he read, reread, studied, quoted, and enthusiastically enjoyed the first edition in 1917. He has read and enjoyed every succeeding edition.

After a careful reading of this latest and best volume, the reviewer is of the opinion that the book is unexcelled, and richly deserves to be placed upon the easily accessible shelves of every practicing physician's library with other medical classics such as Garrison's *History of Medicine*, Howell's *Textbook of Physiology*, MacCallum's *Pathology*, Osler's *Principles and Practice of Medicine*, Hare's *Practical Therapeutics*, and DaCosta's *Modern Surgery*.

THE SURGICAL CLINICS OF NORTH AMERICA. Volume 9, number 4 (Mayo Clinic Number—August, 1929). 208 pages, with 72 illustrations. Per Clinic year, paper, $12; cloth, $16. Philadelphia and London: W. B. Saunders Company.

The August issue of the Surgical Clinics of North American is the Mayo Clinic Number. The general field of surgery is well covered, and of especial interest is the report of the Department of Anesthesia. The issue is well illustrated and worthy of the attention of the general surgeon.

Cancer Deaths Increase.—A steady increase in the rate of deaths from cancer in fifty representative American cities, ranging from 71.6 for each 100,000 of population in 1906 to 117 in 1928, is shown by Frederick L. Hoffman, consulting statistician, writing in the *Spectator*, insurance journal. As a cause of death in this country cancer ranks second only to diseases of the heart. According to this article, eighty of the 143 cities under review showed an increase in the rate of deaths in 1928 over 1927, while sixty showed a decline. Mr. Hoffman makes no attempt to explain the increase, nor does he suggest any formula to account for the marked increase or decline in certain localities. He points out that the general rate in the United States is lower than that of Great Britain, Switzerland, Austria, or Denmark. The rate in Denmark, which is the highest on record, was 140 deaths per 100,000 in 1927.

In a table giving the death rate from cancer and other malignant tumors in 1920 and 1925, arranged according to ages and sexes, Mr. Hoffman points out that the death rate during that period between the ages of 45 and 54, both sexes, increased from 173.3 to 185.7; at ages 55 to 64, from 394.4 to 434.9; and at ages 75 and over, from 974.1 to 1,138.3. In general, the mortality from cancer has been greater among females than among males. Of the cancer deaths in 1925, the greatest number came from cancer of the stomach. Cancer of the liver and gall bladder, and cancer of the intestines were next in the order of mortality.

In concluding, Mr. Hoffman says: "By every standard of mortality investigation these figures are absolutely conclusive as evidence that the actual mortality from cancer in proportion to population is rapidly increasing irrespective of the tremendous progress which has been made in the treatment of the disease."

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CHRONIC UVEITIS*

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As uveitis comprises such a broad field, no attempt will be made to cover it entirely, but a few of the clinical factors relating to the etiology, symptoms, and treatment will be presented, together with some pathologic data observed with the slit lamp and microscope.

It is well known what an important rôle systemic diseases play in producing chronic uveitis. The mere mention of tuberculosis, lues, influenza, diabetes, rheumatism, auto-intoxication, and arthritis deformans as etiologic factors brings to mind many cases of this condition. Other causative factors are epidemic encephalitis, leprosy, anemia, and general malnutrition.

A few remarks about one case of tuberculous uveitis might be of interest. The patient, a white woman forty years old, consulted me because of specks in front of the left eye which had been present for the past week. Vision was slightly diminished in that eye. She gave a history of going suddenly blind four years previously, and not regaining her normal vision for three months. The physician who attended her at that time pronounced the attack glaucoma. The ophthalmoscope showed the vitreous of the left eye to be filled with many fine and a few stringy opacities. There was an old patch of atrophic choroiditis toward the temporal periphery. In spite of all local and general treatment the condition gradually progressed until a typical picture of chronic uveitis developed, with a slight ciliary injection and later a descemetitis. A complete physical examination was made. The only focus found was a slight infection of the tonsils, which were removed, but without abating the condition. On further questioning the patient, we learned that about five years previously she had spent a year in Colorado, for lung trouble. In view of this history, plus a weakly positive von Pirquet and the absence of other etiologic factors, with the possible exception of the tonsillar involvement, which was not thought sufficient to cause the trouble, it was classified as tuberculous in origin.

Among the methods of treatment tried, besides the usual local remedies, were injections of old tuberculin, with little or no improvement, and foreign protein in the form of diphtheria antitoxin, with even less success. Local injections of normal saline solution were also given, but without favorable results.

Focal infection is also a potent factor in diseases of the uveal tract. The more common foci where infection may lurk are the teeth, tonsils, sinuses, and gall bladder, but numerous cases have been reported resulting from auto-intoxication, chronic prostatitis, urethritis, seminal vesiculitis, cystitis, pyelitis, appendicitis, discharging bone sinuses, and even menstrual disorders. The glands of internal secretion must not be overlooked in hunting for the cause of uveitis, as well as focal tuberculosis in the lungs, bones, and joints.

I will not use the space to describe in detail three cases of tuberculous uveitis, one posterior, and two anterior, but will simply give the location of foci of infection. The case of posterior uveitis which took the form of tubercles of the choroid had its focus in the lung. In one of the anterior cases there was also a lung infection, while in the other, tuberculosis of the spine was the focus.

In an analysis of fifty cases of uveitis by Brown and Irons,[1] forty-three, or eighty-six per cent, recovered after the removal of a focal infection. Bulson[2] reported that out of one hundred cases, one third were due to lues, one third to diseased teeth, and one third were distributed among sinuses, antrums, urethras, etc. Analyzing seventy-five cases, Newton[3] found all but nineteen, or 74⅔ per cent, were due to focal infection.

Experimentally, Kubik[4] injected streptococci obtained from dental granulomas into twelve rabbits, without causing any uveal affection, while on the other hand Back[5] produced a typical iritis after placing a piece of alveolar granuloma in a cyclodialysis pocket.

Although not a great deal of new pathologic data has been reported in uveitis, the condition

*Read before the Section on Eye, Ear, Nose, and Throat Diseases of the Medical Society of the State of Pennsylvania, Erie Session, October 2, 1929.

of the anterior segment of the eye has been more clearly elucidated since the advent of the slit lamp. At biopsy the superficial layers of the cornea, iris, sclera, and choroid have shown an infiltration with lymphocytes, while the deeper layers have revealed the presence of epithelioid, lymphocytic, giant, and plasma cells, also areas of necrosis. Ossification has been found in the choroid following long-standing uveitis. In tuberculous iridocyclitis, fatty infiltration and degeneration have been present in the anterior segment, the iris being almost completely infiltrated and the ciliary body slightly so. With the slit lamp the triangular collection of spots with the base upward can be seen more clearly on the posterior surface of the cornea. Leukocytes are seen, not only on the posterior surface of the cornea, but also floating in the aqueous humor. They probably come from the iris and ciliary body. Atrophy, flattening of the crypts, and changes in the trabeculæ of the iris are observed, as are changes in the color of the iris in prolonged uveitis.

The symptoms of chronic iridocyclitis are usually ushered in by a gradual failure of vision, with slight ciliary injection, tenderness, and pain, although the latter three may be absent for a long time. The anterior chamber may be deep at the onset, while there may be a slight increase in tension, with a possible contracted or dilated pupil. Pain on accommodation is sometimes to be regarded as an early symptom, according to Fischer,[6] and is due to the pressure of inflammatory exudate on the nerve endings. A punctate keratitis develops, and fine floating opacities are seen in the vitreous humor. General contraction of the visual fields, and also central scotomata were found by Martin[7] in eighteen cases of toxic uveitis due to either infected teeth or tonsils. Other collateral symptoms are vascularization of the cornea and neuroretinitis.

Other than the usual treatment of atropin, dionin, hot stupes, and salicylates in large doses, several methods have been tried, such as vaccines, foreign protein, organotherapy, diathermy, x-ray, tuberculin, local installations of adrenalin (1 : 5,000), and repeated paracentesis.

Some authors have reported excellent results from the use of vaccines. When the latter are autogenous, the outcome is apt to be better than with a stock vaccine. An illustration of the former can be cited in a patient who came for consultation because of failing vision and cobweb formation in front of his right eye. He had slightly infected tonsils, which were removed, and a chronic prostatitis. His right eye showed a typical anterior uveitis. An autogenous vaccine was made from his prostatic discharge, which harbored Staphylococcus albus in pure culture. He was given a series of vaccine injections, together with prostatic massage, and at the end of four months his vision had improved from 4/40 to 6/20 with correcting glasses. One cannot say the progress was due entirely to the vaccine, as he received the prostatic massage biweekly, besides local treatment, but he improved during the injections, and did not do so well when they were discontinued for a time. In another case accompanied by hyalitis, an injection of stock vaccine was given. The following day retinal hemorrhages occurred.

Foreign protein is another method of treatment which has called forth contrary opinions. We found it of little value in the long-standing cases, especially of the posterior type. However, it seemed beneficial in the more recent cases of anterior uveitis.

The same diverse views have been expressed about the other therapeutic measures mentioned, so that it is difficult to form an exact opinion of any one procedure. Taken separately, they probably would not be effective, or only slightly so, but when combined with the local treatment or another method such as vaccines and prostatic massage, as cited above, or foreign protein and diathermy, x-ray, or some other combination, they undoubtedly are of value. Mention will be made of the use only of internal glandular therapy as a possible aid in controlling ocular affections.

Dr. Jackson,[8] roentgenologist to the Moses Taylor Hospital of Scranton, told me recently of a case of uveitis with parotitis which persisted in spite of all methods of treatment attempted. Finally, he tried weak x-ray exposures to the eyeball, and in a miraculously short time improvement commenced.

Five case reports are given in brief form, some of which have already been mentioned.

CASE 1. A white male, 42 years old, had chronic uveitis associated with chronic prostatitis. He improved under massage of the prostate and the administration of autogenous vaccines. His vision increased from 4/40 to 6/20 with correcting glasses.

CASE 2. A white male, 48 years old, had persistent anterior uveitis associated with tuberculosis of the lungs. He improved following local and general treatment with old tuberculin, but his vision diminished.

CASE 3. A white female, 40 years old, had posterior uveitis associated with pulmonary and tonsillar infection. Old tuberculin and foreign protein were of doubtful value. The vision diminished markedly.

CASE 4. A white female, one year old, had iridocyclitis following an attack of influenza. Local treatment only was given the eye, which became quiet, but detachment of the retina resulted and the vision was lost.

CASE 5. A female, 35 years old, had a penetrating wound of the ciliary region. The conjunctival flap was

treated locally after excision of the protruding iris, and tetanus antitoxin was given. The eye became quiet for five months, when a low-grade uveitis manifested itself, producing a soft eyeball and necessitating enucleation.

Local treatment consisting of atropin, dionin, and hot stupes was used in all the above cases.

COMMENT

Probably from one third to one half of the cases of chronic uveitis are due to focal infection or infections (there may be two or more foci present at the same time). About one third may be due to tuberculosis or to lues.

No one general method of treatment should be used to the exclusion of local methods. At best the former are merely adjuncts. Treatment with vaccines is not wholly unattended with risk, as they may cause a reactivation of a dormant area, or produce new areas of inflammation. The same may be said of the use of tuberculin. Foreign protein was found helpful in cases of anterior uveitis of not too long duration, but was of no avail in the well-established posterior type of case. Caution must be exercised in the use of foreign protein to avoid anaphylactic shock.

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ABSTRACT OF DISCUSSION

DR. J. DEWITT JACKSON (Erie, Pa.): I want to ask Dr. Scarlett if he has had any success with glaucosan in getting dilatation of the iris in the early stages of this trouble. In my own experience I have felt it was a distinct help, provided the case had not proceeded too long so that the adhesions in the posterior synechia were too dense.

DR. DAVID N. DENNIS (Erie, Pa.): In tuberculous uveitis, a thorough physical examination should be made of the chest before any tuberculin is used. I remember very distinctly several cases in which the von Pirquet test gave not only a positive local reaction, but also a very distinct focal reaction. If the von Pirquet reaction is pronounced, not more than 1/20,000 or even less of tuberculin should be used for the initial dose. The dosage should be increased very slowly, not oftener than every fourth day. The treatment should extend over a long period. Often we stop this treatment too soon, only to find that the inflammation returns after a short time. I have in mind a case of tuberculous scleritis in which the inflammation extended to the iris and deep structures of the uveal tract. The tuberculin was used in minute doses over a long period of time, with very happy and permanent results.

Of course, fresh air, good food, sunshine, and the general physical well-being of the patient should not be neglected. Radiant heat, preferably the electric bulb or the "glower" used in many of the modern lamps, gives relief from pain and undoubtedly hastens the absorption of the inflammatory deposits.

A railroad man received a very slight injury to the eye, but in a short time (a matter of a month) developed a tuberculous choroiditis. Undoubtedly, his resistance was low and he was in condition to accept the infection. In this case, the von Pirquet test was pronounced locally, with a very positive focal reaction.

In interstitial keratitis, the uveal tract may become involved, and the iris, choroid, and aqueous contain inflammatory deposits, also deposits on Descemet's membrane. In this type of case, inunctions of mercurial ointment are satisfactory. I have never found any advantage in using the salvarsan. It is useful when there is a history of primary syphilitic infection, but in the inherited type, inunctions of mercurial ointment will serve much better. In these cases, it is essential, and often quite difficult, to keep the pupil dilated. If there is great difficulty in doing this, powdered atropin and dionin can be used with great satisfaction. The puncta should be compressed by a little device that I remember seeing Dr. L. Webster Fox use. After the cornea clears and it is possible to get a view of the eyeground, it will often be found that accompanying the iritis and interstitial keratitis there have been several spots of choroiditis. Instead of using the iodids in many of these cases, the old-fashioned syrup of iodid of iron in increasing doses serves the purpose better.

Rheumatic uveitis is more or less focal in its origin. Until the focus of infection can be found, naturally the patient must be treated expectantly—salicylates, rest, and heat. In cases of gouty uveitis, the cause is undoubtedly a fault in the individual's chemistry. Colchicum, heat, and a well-regulated diet should be insisted upon. Where the cornea is hazy and the deposits in the vitreous are numerous, subconjunctival injections of saline solution and dionin are very helpful in clearing the eye. In many cases of uveitis, there is an increase of ocular tension. In this type of case, it is quite essential to keep the pupil between dilatation and contraction. I feel that in this type of case the patient should never be allowed to use atropin at home. The physician should use it in his office—homatropin, scopolamin 1/10 grain to the ounce, and eserin 1/16 or 1/20, as the occasion requires.

A number of years ago, I used the binocular vertical microscope, but naturally the illumination was poor. Later, when the slit lamp came, we had a microscope with an improved and more perfect illumination. The slit lamp is particularly useful in searching out the conditions present on Descemet's membrane, iris, lens capsule, and vitreous. In operative and traumatic cases, nothing should be attempted in the way of surgical interference until the cornea is clear, the so-called K.P.'s gone, and the eye free from irritation for a number of months. I often feel that when a secondary traumatic uveitis is present, there is a focus of infection. After the operation, resistance is broken down and the focus of infection in the tonsils or mouth starts the cycle of destructive inflammation.

DR. MERVYN M. WILLIAMS (Scranton, Pa.): I think it worth while to call attention to one factor in the matter of diagnosis and another in the matter of treatment. The first is the etiology of some cases of uveitis, in which there are changes in the choroid caused by high myopia. This should be added to the list of possible causative factors.

The second thought which seems well worth stressing is that brought out by the paper in regard to low-

grade inflammation due to congestion of the vascular uvea. We all know that every so often after a case of uveitis has been treated for some time, with continued irritation, somebody finally does a complete refraction, provides a proper glass, and the chronic low-grade inflammation promptly clears up. So it seems to me that among the various methods of treatment which Dr. Scarlett has outlined, the matter of refraction is one of prime importance, and should be given as much attention as any other.

DR. JAMES G. KOSHLAND (Lewistown, Pa.): I should like to ask about these cases from an economic standpoint. Shall we put these people back to work? We use atropin to rest the bad eye, and we certainly should rest the good eye, but in the chronic cases should these people go back to work, say when their work is in a silk mill? Absolute rest, especially in tuberculous uveitis, seems necessary.

DR. SCARLETT (in closing): Answering Dr. Jackson's question about glaucosan, I have had no experience in using it.

I want to thank Dr. Williams for reminding me of the two points he brought out—the high myopia causing low-grade inflammation, and the factor of eyestrain.

As to the last question, when an eye is sick it must be put at rest just the same as any other part of the body when it is sick. From an economic standpoint it is unfortunate when a patient has a sick eye, but it seems to me the only thing to do is to rest the eye until it is well again.

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*Symposium On Encephalitis**

TOXIC ENCEPHALOSIS IN THE ACUTE INFECTIONS OF CHILDHOOD†

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In borrowing from renal terminology I feel that a new term should be introduced only when it tends to bring clarity to a subject. The word "encephalitis" is one of the most misused terms in neurology. According to Professor Joseph McFarland, inflammation is the sum of all the phenomena manifested by a tissue reacting to injury. It should be very carefully separated from "degeneration," not only from the pathologic viewpoint, but from the clinical as well. A large dose of phosphorus produces *degeneration* of the renal substance (as well as of other tissues), while organismal infection produces *inflammation*. It is this distinction that is expressed by the terms nephritis which means an inflammation, and nephrosis which signifies a degeneration. Christian's[1] recent article dealing with this subject is from the viewpoint of a clinician and not of a pathologist. I therefore propose that a distinction be made between an inflammation of the brain, which should be called "encephalitis," and a generalized degeneration of the brain for which the term "encephalosis" is proposed.

In textbooks on neurology, encephalitis is divided into two major forms, inflammatory and noninflammatory. The former is divisible into (1) purulent, such as those due to pyogenic organisms, and (2) nonpurulent, of which epidemic encephalitis and paresis are the outstanding examples.

It is to the second great group—the noninflammatory forms—that the proposed term of encephalosis is applicable. This is the form that occurs in association with the acute infectious diseases of childhood, as well as toxic and infectious diseases of other sorts.

Apparently no infectious disease of childhood, no matter how mild, is immune against developing cerebral complications. The list of diseases in which cerebral symptoms have been described looks like the index of all the infectious diseases to which a child is subject. But of these, five stand out prominently—measles, scarlet fever, pneumonia, pertussis, and vaccinia.

The symptoms are those which occur in all toxic and infectious states, and consist of the usual ones beginning such processes, as headache, lassitude, vomiting, fever, and convulsions. Mentally the patients are apathetic, irritable, stuporous, or delirious. Evidence of gross damage to the brain is shown by muscle twitchings and paralyses in various parts of the body. Signs of a so-called meningismus may be evident. All of these symptoms have a pathologic explanation. From the clinical laboratory standpoint little or no information can be obtained, except that the central nervous system is under considerable pressure and may contain a moderate number of cells and an increase of globulin.

The earliest case that brought this clinicopathologic picture very vividly to me occurred in 1923. It was that of a white man of twenty who was admitted to the Philadelphia General Hospital in the service of Dr. Torrey on August 30, 1923, and died September 8, 1923. There were the typical history, clinical findings, and laboratory verification of typhoid fever. Towards the end there were the typical signs of an "encephalitis" (diagnosed clinically), and with signs of meningeal irritation. At postmortem examination, nothing of a gross nature could be made out except an intense congestion and external hydrocephalus and edema of the substance of the brain. Microscopic examina-

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†From the Graduate School of Medicine of the University of Pennsylvania, the Laboratory of Neuropathology of the Philadelphia General Hospital, and the D. J. McCarthy Foundation of the University of Pennsylvania.

tion, however, showed the true nature of the condition. There was a rather marked edema of the membranes and of the brain tissue proper, and a so-called productive endarteritis of the small cortical vessels of the entire brain. As a result, the lining cells of the small vessels, which normally are rather flat, became swollen and at times this swelling was so marked as to obliterate the vessel lumen. Evidence of obstruction to the flow of blood in these small vessels was shown by devitalization of small sectors of the cortical substance, or what may be considered as anemic infarcts which at times conglomerated to form rather large areas. For the most part, however, these areas were rather small and had to be sought for, and could be very easily overlooked. The general findings in the bodily organs corroborated the diagnosis of typhoid fever.

A case of this sort is sufficient to give us an inkling as to the explanation for the clinical manifestations. One of the earliest changes occurring in this type of case is a swelling of the lining cells of the smallest vessels in the cortex. Were this to occur in the larger vessels, no secondary changes would occur in the brain tissue, but because of the narrowness of the lumina of the small vessels there is obstruction to the blood flow. As a result, secondary changes occur first in the most sensitive elements of the central nervous system, the ganglion cells. As a consequence of this change at this stage, the clinical picture is that of a mild delirium or confusion with muscle twitchings such as is seen in nearly all severe infections and toxemias. As further swelling of the lining cells of the small vessels takes place, the blood flow is so lessened that degeneration of the ganglionic elements occurs, and then the symptoms will depend on the location of these changes. While as a rule these foci are microscopic because of the smallness of the vessels involved, still there may be a combined involvement of many neighboring vessels with larger areas of softening resulting. This explains the lesion in our case of typhoid fever, which was rather extensive. It explains the occurrence of weakness or paralyses of various parts of the body as a result of the lesions in the motor cortex or pathway. With recovery from the acute infection there may be complete subsidence of the neurologic symptoms. This can readily be explained by the enormous compensation which takes place after such small cortical lesions. It need only be mentioned that the brain is not the only organ in which changes of this sort can occur.

In acute rheumatic fever in children, one sees as marked cerebral symptoms as is possible to get in any of the acute infections. A condition of this sort is well typified by the case of an eleven-year-old white boy who entered the Philadelphia General Hospital, June 11, 1927, and who died ten days later. There were in this patient all the signs and symptoms of a typical acute rheumatic fever of about two-weeks' duration. The patient was extremely toxic and restless. He showed a double murmur at the apex. He had slight choreic movements. Towards the end of the illness he was noisy, restless, and showed all the signs and symptoms of brain involvement. He died rather suddenly. The laboratory findings were confirmatory of the clinical diagnosis.

At autopsy the organs of the body showed evidence of the acute rheumatic and cardiac conditions. The brain showed microscopically the intense swelling of the lining cells of the smaller cerebral vessels, with very occasional areas of anemic infarction.

It need only be mentioned, in comment, that this case showed the clinical picture of what has been generally called an "encephalitis." Suffice it to say that no evidence of inflammation was to be found, and the picture was in all respects similar to that noted in the first case.

As an example of the acute infections occurring during childhood, the following case of pertussis might be mentioned. It concerned a colored child of nine months, on the service of Dr. Le Boutillier. The child was practically moribund on admission and died within twenty-four hours. At autopsy there was found a terminal bronchopneumonia, with congestion in all the organs of the body. The brain showed grossly a marked cyanosis and microscopically a marked swelling of the lining cells of the smallest blood vessels, with severe acute ganglion-cell changes and only an occasional anemic infarct, extremely small in size. An external hydrocephalus was quite evident.

We have considered up to this time a change in the brain that is very common in many of the acute infections and toxemias. Another type of lesion which occurs is what has been described in the literature as hemorrhagic encephalitis, or the so-called brain purpura. It occurs not only in the acute infectious processes, but also in the toxemias. Cases of this sort have been described from my laboratory in bronchopneumonia, rheumatic fever, nephritis, and in some of the anemias. This was the type of change found in the brains of some of the patients described by Musser and Hauser[2] occurring during measles. It must be emphasized that many of their patients died in convulsions. A typical case in which changes of this sort occurred was found in a

colored child of two, from the service of Dr. Le Boutillier. The previous history was normal. Four months before admission an attack of pneumonia had occurred from which the child made an imperfect recovery. On admission to the hospital, he showed all the signs and symptoms of an acute bronchopneumonia. At autopsy, petechial hemorrhages were to be seen confined to the white matter of the brain, which, on microscopic examination, showed small hemorrhagic spots around which glial mobilization was taking place.

In none of the many cases of this sort which have come to our attention have inflammatory changes been found in the brain, so that the designation of encephalitis is distinctly wrong and misleading. It is also for this type of case that the name "encephalosis," or "hemorrhagic encephalosis" if you wish, might be more correctly applied.

Another finding pathologically that may play a more important part than hitherto suspected is the external hydrocephalus and the hydration of the brain that is usually associated therewith. It is now well known since the work of Rowntree that water intoxication can and does occur with the symptoms of restlessness, delirium, stupor, coma, and convulsions. The meningeal symptoms may have their explanation in the abnormal distention of the subarachnoid space. As the process increases and the brain itself becomes more and more hydrated and swollen, it may eventually obliterate the subarachnoid space, and the final result may be an enormously swollen brain with but little fluid in the spaces surrounding. Under the microscope the picture is just as easy to recognize as has been so clearly shown by Kubie[3] in his recent work on hydration of the brain, where pericellular and perivascular spaces are so clearly brought out. These findings we have been able to verify, not only in experimental animals, but in very severe infections and intoxications, especially alcohol poisoning with delirium tremens as the most typical example.

In the acute infectious diseases of childhood one finds usually the same type of change in the brain described for hydration, but generally to a much less degree than is seen in the experimental animal and in delirium tremens, but sufficient to convince one that brain hydration must be considered in the clinical interpretation of these cases.

True encephalitis includes a well-defined group of cases in which an inflammation of the brain is present. An effort is made in this contribution to separate from it a group of cases occurring during the course of various infections and toxemias in which cerebral symptoms appear. This applies with special emphasis to the acute infections of childhood. For this symptom complex the name of "toxic encephalosis" is suggested, in imitation of the term used in renal pathology.

In brief, the symptoms of a toxic encephalosis are headache, apathy, confusion, irritability, stupor, and convulsions—symptoms which occur in the course of any severe toxemia or infection. As a rule, there is complete recovery from these symptoms as soon as the basic illness abates. However, the symptoms may persist for a while, but because of the enormous compensation which takes place in the brain, no permanent sequelæ are found. This is certainly in marked contrast to encephalitis of the epidemic type, where the after results are so intense and persisting.

From the pathologic viewpoint, five types of changes can occur in the brain:

(1) The earliest and mildest change is swelling of the lining cells of the small capillaries, which may reach such a marked degree that obstruction to the circulation takes place, with areas of anemic infarction resulting. Proliferation of the endothelial cells may be seen, with new vessel formation, so that we have finally the same picture seen in certain types of syphilis of the central nervous system, first described in 1904 by Nissl and Alzheimer as "Endarteritis Syphilitica of the Small Cortical Vessels." Since then it has been described in various metallic poisonings, especially in the experimental animal.

(2) The small devitalized areas as a result of cutting off of the blood supply appear mainly in the cortex and are different from areas of softening in the ordinary sense of the word. They fit in better with areas of incomplete cutting down of the blood supply. While minor degrees of weakness or paresthesias may result from areas in the motor or sensory cortex, they are usually transient, since for the most part the areas are too small to occasion gross damage.

(3) While direct toxic action on the ganglion cells is to be considered, still such action is usually minor. There is probably more effect from a cutting down of the blood supply than from direct toxic action.

(4) The purpuric condition, especially in the white matter, which has already been described in some of our cases, is certainly responsible in some of the cases for the cerebral symptoms. This has been particularly stressed in some of the forms of malaria by Dürck.

(5) Finally, we have taken note of the brain hydration which occurs in some of our cases. That this may be as important as any of the changes found is to be seen from the work of

Rowntree and Kubie, and in our own work (in collaboration with Temple Fay) we have found that water intoxication must be recognized as capable of producing symptoms in the human being just as it does in animals.

No mention was made in this contribution of the so-called encephalitis that occurs after measles and after vaccination, because I have had no personal experience with these conditions, clinically or pathologically. Cases have been described in the literature, but few have had expert neuropathologic examination. The most recent report in the literature was a study by Greenfield,[4] the neuropathologist of London. In his study of one case he comes to the conclusion that the pathologic and clinical picture is different from poliomyelitis and epidemic encephalitis. He found in the brain three main types of changes: (a) diffuse congestion with at times petechial hemorrhages; (b) perivascular infiltration with "round cells," which, however, may be absent; and (c) what is most characteristic, perivascular zones of demyelination. He likewise feels that no clinical or pathologic distinction can be drawn between the brain changes following measles and that which may follow vaccination and smallpox.

This report needs little comment. For the most part it is an excellent contribution to an interesting and difficult subject. The areas of demyelination have been described by so many authors that their presence cannot be doubted. The description of the small round-cell infiltration does not fit in with that seen in poliomyelitis or epidemic encephalitis, but it is more like that we have seen in pernicious anemia, an admittedly noninflammatory disease of the nervous system, but rather a degenerative disease. The photomicrographs certainly suggest degeneration rather than inflammation. This paper does not, therefore, disturb our contention that the changes in the brain following the acute infectious processes are not inflammatory, but degenerative.

There is another fact which may be disturbing—that many times the cerebral symptoms (or even cord symptoms) do not occur during the height of the original infection but two or three weeks after it. Rivers,[5] in his contribution on the viruses, tries to explain this factor by presupposing an allergic condition. It has been well known for years that the neurologic symptoms in diphtheria occur for the most part two or three weeks after the acute condition and less often during it. This means to me that the pathologic changes are going on during the entire time, but do not reach a degree clinically recognizable, and the final episode is taken to be the onset. Dr. Spiller has described a case in his own practice which may have a distinct bearing on this problem: A hysterical woman swallowed some "Rough On Rats" in an attempt to "get even" with her husband. She was immediately taken to the hospital, where stomach lavage was done. She made a complete recovery at that time, but two weeks later developed an arsenical multiple neuritis which recovered under treatment. Dr. Spiller feels as I do that the pathologic changes in the peripheral nerves were going on for the two weeks before the clinical picture was fully developed.

A word might be said about the occurrence of convulsions in these conditions. Many neurosurgeons have found a tremendously distended subarachnoid space over the cortex in convulsive conditions. That has been our finding at postmortem, and besides, a markedly hydrated brain. For this reason spinal drainage is indicated as a therapeutic procedure as well as dehydration.

Summary and Conclusions

(1) An effort is made to separate the inflammatory from the noninflammatory conditions in the brain. The former is correctly interpreted as an encephalitis.

(2) The noninflammatory brain changes occurring during the course of severe infections and toxemias deserve to be definitely separated from the inflammatory brain conditions. They are interpreted as degenerative conditions, and a new name is suggested for them—the toxic encephaloses.

(3) Cases illustrative of the various types of pathologic changes are briefly described. Five distinct types of pathologic processes are enumerated: swelling and proliferation of the lining cells of the small blood vessels; obstruction to the blood supply of scattered small sectors, with anemic infarction; direct toxic action on the ganglion cells; brain purpura; and brain hydration.

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CLINICAL EVIDENCES OF ENCEPHALITIS IN THE ACUTE INFECTIONS OF CHILDHOOD*

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Those who come into contact frequently with the acute infectious diseases of childhood and with the upper respiratory diseases of childhood have recognized for many years that these diseases may be associated with an encephalitis or an encephalomyelitis. This encephalitis or encephalomyelitis occurs either during or following the acute stage of the disease from which the child suffers and at times well after the child's apparent recovery, but from clinical evidences it is not known to occur before or during the prodromal stages of the associated disease. It is only the constancy of its association with the acute infectious diseases that has prevented it from being considered as an intercurrent infection. However, so many cases have been reported with an interval of one, two, three, or even four weeks between the child's acute infectious disease and the encephalitis that the conception of an intercurrent or possibly a secondary infection becomes quite plausible.

Although from a clinical standpoint this conception may seem plausible, from a bacteriologic standpoint, at least, it is necessarily theoretical since the exact cause of this type of encephalitis, as also of acute epidemic encephalitis, has not been found.

We are indebted chiefly to Winkelman[1] and later to Grinker and Stone[2] for more accurate descriptions of the microscopic pathologic changes in the brain tissue in these cases, changes which resemble very closely those caused by arsenic or lead poisoning and which do not resemble the changes caused by bacterial invasion or by acute epidemic encephalitis. Whether the term "toxic encephalitis" should be applied to this group or "encephalosis," as Winkelman has suggested, is a problem more fitted to the field of the pathologist. However, until it is determined whether the changes in the brain tissue are due to toxins, allergic reactions as Rivers[3] suggests, or the secondary invasion of an unknown virus, it is impossible to classify this disease picture clinically under any single term. It would seem justifiable to use any one of two or three terms for this condition when its exact cause is unknown, but from the basis of pathologic findings which include the only part of the disease picture that is well described, one would feel justified in preferring the term encephalosis to that of encephalitis. Other terms which have been used to describe this condition are acute nonsuppurative encephalitis, acute hemorrhagic encephalitis, and acute serous encephalitis, none of which seem to be as satisfactory as either toxic encephalitis or encephalosis.

As early as 1895 Putnam[4] and Oppenheim[5] wrote of encephalitis following influenza.

Abt[6] in 1906 wrote of an acute nonsuppurative encephalitis in children, stressing in particular the hemiplegic type associated with measles, scarlet fever, pneumonia, and pertussis. To this group may be added chickenpox, typhoid fever, mumps, erysipelas, and vaccinia. In the past few years, particularly 1926-1927, encephalitis associated with measles has received more attention, especially in this country, as reported by Musser and Hauser[7] in New Orleans and Neal and Appelbaum[8] in New York; while in England, the Netherlands, and Switzerland, encephalitis associated with vaccinia has given great concern on account of its high mortality, despite the comparatively small number of cases reported. The administration of antirabies serum has been followed by encephalitis, and it has been reported as occurring in cases of very mild upper respiratory infections in which pneumonia did not develop and in cases of gastroenteritis.

Anderson,[9] and Brown and Symmers[10] reported a number of cases of an "acute serous encephalitis" which were rapidly fatal. The onset in these cases varied considerably, but in most was associated with diarrhea, vomiting, or a severely injected pharynx. The marked symptoms were irregular respiration, ptosis, nystagmus, hemiplegia, coma and convulsions, and a fever ranging from 105° to 106°, followed by death in from twenty-four to forty-eight hours. Anderson stated that on pathologic examination the amount of interstitial edema seemed to rule out a disturbance which was purely toxic in nature. The accuracy of such a rule is open to some question, particularly when one considers the very similar pathologic condition which occurs in acute lead poisoning, and in other acute poisonings. In such cases the brain tissue changes may have been due entirely to the toxemia which was secondary to a bacterial invasion elsewhere in the body.

Grinker and Stone[2] reported later a group of thirteen cases, among which those coming to autopsy presented a pathologic picture which one naturally associates with toxemia and which they called toxic encephalitis. Five of these cases, in children ranging from two months to seven years, showed a definite focus of infection, such as the middle ear, the upper respiratory tract, or the alimentary canal. The leukocyte count

*From the Department of Pediatrics, School of Medicine, University of Pennsylvania.

ranged from 15,000 to 23,700. The neurologic signs and symptoms gave evidence of a diffuse cerebral involvement. Two showed meningeal symptoms, and in two other children there were clonic movements of one extremity. Nystagmus and strabismus were seen in one case, and papilledema in one case also, which suggested edema of the brain. Aphasia was noted in one case. Drowsiness and coma supervened quite rapidly in most of these cases, with death resulting in a comparatively short time. In only one did the spinal fluid show any increase of cells, and the increase in this instance was only up to forty-two cells, mostly lymphocytes, without any symptomatic evidence of meningeal involvement. The two cases which showed meningeal symptoms had no increase in globulin, as well as a normal cell count in the spinal fluid. Such a condition naturally suggests that the so-called "meningismus," which is commonly seen as a temporary clinical sign in almost any severe acute infection, is in reality a mild or temporary toxic encephalitis or an encephalosis in which rapid recovery occurs as the toxemia is overcome. This has been suggested by several writers.

The microscopic pathologic picture in these five cases was fairly uniform, with severe degeneration of the ganglion cells, obliteration of the lumina of the capillaries, and proliferation of the glia cells without marked cellular infiltration. These pathologic changes were also present in two cases of septicemia, fatal within forty-eight hours of the first symptoms, which showed generalized convulsions, rapid rise in temperature, inequality in the deep reflexes, a bilateral Babinski sign, and nystagmoid movements of both eyes. No actual bacterial invasion of the brain tissue could be found. Only two cases are reported with recovery, in which one suffered from a throat infection and the other from pneumonia. The signs and symptoms included severe headache and fever, pain in the eyes, cervical rigidity, bilateral Brudzinski without a Babinski or ankle clonus, left facial paresis, deviation of the tongue to the right, absent abdominal reflexes, an increase of the cells in the spinal fluid in the child who had no meningeal signs, and a normal cell count in the child who showed marked meningeal signs.

The cases which have been studied from pathologic sections are much more important for the explanation of those cases which actually recover. Recovery has occurred usually in those cases following the acute exanthems and quite commonly in those cases of so-called vaccinia encephalitis, though in the latter, the mortality is somewhat higher than in the former.

To the average practitioner in the eastern United States, by far the greatest interest should center around those cases associated with scarlet fever, measles, pertussis, mumps, and varicella, since vaccinia encephalitis is very rare in this country. I do not mean by this statement that we should fail to observe carefully all vaccinia cases for suspicious signs or symptoms.

A few of the early reports of this type of encephalitis or encephalosis should be mentioned here. Concerning varicella, we find a report as early as 1893,[11] and concerning measles as early as 1905.[12] With respect to vaccinia it was not until 1924 that any careful reports were made, whereas for mumps, scarlet fever, and pertussis, only very occasional cases have been reported at all. The reports already reviewed give a very good idea of how carefully one must observe the nervous phenomena associated with the acute upper respiratory infections, pneumonia, and gastro-enteritis. The onset of vaccinia encephalitis occurs, as a rule, near the ninth to tenth day following vaccination, whereas that from measles, pertussis, scarlet fever, and varicella usually accompanies the severe symptoms of the disease or is separated from these symptoms by quite an interval.

I wish to report five cases which are fairly representative of the group which any physician may observe in his own practice, all of which have recovered or are on the road to recovery.

CASE 1. A boy, aged eight, was admitted to the University Hospital, Philadelphia, with a history of mumps four weeks prior to admission. He had not regained his health following the mumps, and a small tender lymph gland had been noted in his right axilla. At 11.30 a.m. on the day before admission he was sitting at a table writing, when he suddenly fell unconscious from his chair with arms and legs convulsing. He was placed on a couch, where he continued convulsive tremors with frothing at the mouth, lasting about five minutes. Two and a half hours later he had a second convulsion of shorter duration, but remained unconscious from the first attack for eight and a half hours, when he partially regained consciousness. Another convulsion occurred early in the morning of the day of admission to the hospital, followed by several others, one of these lasting for about fifteen minutes just previous to admission at noon.

He was a two-weeks-premature baby, but his development had been unusually good. The tonsils and adenoids had been removed at four years, and he had had measles with pneumonia at three years, followed in three weeks by chickenpox, but with good recovery. There had been pain in the right knee seven months before, with quick recovery. He had had a severe bruise to the forehead at two years, but without nervous symptoms.

When examined his temperature was 103°. He was in a restless stupor with rigid neck and head thrown back almost to the position of opisthotonos. His right cremasteric reflex was absent, both patellar reflexes were sluggish. There was a marked hyperesthesia all

over the body, a positive Kernig sign on both sides, and a double Babinski and Brudzinski sign. The leukocyte count was 15,900, with a differential count of 78 per cent neutrophils, 13 per cent lymphocytes, and 9 per cent large mononuclears. No stippling was seen. The spinal fluid at this time was clear and not under increased pressure.

The temperature remained at 101° or over for two days, and then slowly dropped to normal in four more days. On the day after admission the spinal fluid showed 62 cells, with 18 neutrophils and 44 lymphocytes, and an increased globulin. The Wassermann and all other tests were negative. After the second lumbar puncture the stupor gradually disappeared, and the reflexes gradually became normal. About two weeks after recovery from his nervous symptoms, he developed while in the ward a small abscess on the inner side of the right biceps, which was evacuated one month after admission. This had apparently little connection with his previous condition. An x-ray of the sinuses was negative, but one of the chest showed a few calcified glands in both hila. A tuberculin test was positive to 0.01 mg. of old tuberculin. He was discharged in good condition.

This case can be readily explained upon the basis of the disease which we are discussing, but not easily upon any other basis, and it would seem justifiable, even without a pathologic examination, to classify it as a case of acute toxic encephalitis or encephalosis following mumps.

CASE 2. A girl, aged four years, nine months, was admitted to the University Hospital following an attack of whooping cough which began about eight weeks before her admission, the cough lasting four to five weeks. Four weeks before admission she began to have mild convulsive seizures of the upper part of the body, with head bent backwards and neck rigid. These attacks occurred every half-hour or hour for two days. Her speech was lost from the beginning of the first attack, and she showed a marked internal strabismus for a large part of this time, also a slight diarrhea. Soon the arms developed almost a flaccid paralysis with extreme incoördination. She seemed conscious, but could not talk. The family thought there had been no fever. Her previous history showed normal development, with no history of any other infectious disease.

On admission she lay thrashing helplessly about in bed, crying weakly when disturbed, unable to stand or hold anything in her hands, with complete flaccidity of all her muscles, no actual paralysis, but very marked incoördination and atonia over the entire body. The biceps, triceps, patellar, achilles, and abdominal reflexes were all equal on both sides and all quite hyperactive. A well-marked ankle clonus and a suggestion of patellar clonus were present. There were some athetoid movements of the arms at times of disturbances. The spinal fluid, Wassermann, blood counts, urine, etc., showed nothing of importance.

A slow improvement took place and is still going on, since the child has not yet left the hospital at the time of preparation of this report. The reflexes are now practically normal, the muscles have practically normal tone, and the incoördination has disappeared. Though no pathologic sections are available in this case, little doubt exists in our minds as to its classification with the encephalitis or encephalosis associated with whooping cough.

CASE 3. A boy, aged four years, was seen by the writer at his home just following the height of his measles rash, lying in a stuporous condition, following what the parents described as a convulsion. The neck was rigid, the eyes had a tendency towards internal strabismus, with a very sluggish reaction of the pupils to light. There was a marked ankle clonus on the right side with a positive Babinski on the same side, while the reflexes on the left side were practically normal. Otherwise, he showed the late manifestations of severe measles, with a temperature ranging around 104°. The spinal fluid had no increase of cells or globulin, while the urine and blood showed little of importance.

No more convulsions occurred, but the stupor continued with increased reflexes on the right side, including the biceps and triceps. The strabismus disappeared within two days, and with its disappearance the rigidity of the neck diminished rapidly and he regained consciousness. The reflexes returned to normal more slowly, and within two weeks the boy seemed quite normal.

This is a typical example of other cases of post-measles encephalitis which I have seen, which have been reported and which are easily recognized by the average practitioner.

CASE 4. A boy, aged six months, was seen by the writer following what the parents termed a "weak spell" in which he became extremely pale and seemed quite stiff and lifeless for a few moments. He had previously been vomiting, and for two days had suffered from diarrhea with considerable mucus. About four hours later he had a convulsion which, despite all ordinary efforts at control, continued for about two and a half hours. This was followed by others which were not so intense or prolonged, but the boy remained in coma for one week. Except for the first day, however, no other convulsions occurred. A marked internal strabismus was noticed from the beginning of his convulsions, the right side of the body was extremely spastic, and the reflexes on the left side were also increased. The spinal fluid, examined twice, was normal in every respect. The leukocyte count of the blood was only slightly elevated. The Babinski sign and ankle clonus were positive on the right side.

Consciousness gradually returned after one week, and a marked paresis was noted of the right side of the face, the right arm, and the right leg, with weakness of the right external rectus muscle of the eye. At first it was felt that his vision was impaired, but this has later seemed improbable. The paresis of the right side has improved but slowly. The reflexes, after nine months, are markedly increased on that side, but the affection of the rectus muscle and of the facial muscles has practically disappeared. This case is of particular interest since it is much more difficult to differentiate it from epidemic encephalitis. The more probable diagnosis of toxic encephalitis or encephalosis is based chiefly upon the signs of a "secondary" affection, occurring in the midst of a gastro-enteritis which had already been present for two days, and also upon the absence of increased globulin or cells in the spinal fluid. While certain cases of epidemic encephalitis do not show cells or increased globulin in the spinal fluid, the opposite is usually true, whereas in the condition we are discussing, increased cells and globulin are comparatively rare occurrences. Also in epidemic encephalitis the sequelæ are more apt to show progressive increase in sign and symptom, whereas in this case the improvement has been steady. In this one case I base the diagnosis merely upon a strong probability, which is not a thoroughly sound basis, but an interesting one for discussion and further investigation.

CASE 5. J. C., male, four years old (patient of Dr. J. C. Gittings), at four months of age developed

suppurative otitis media, followed by mastoiditis, retropharyngeal abscess, and erysipelas. Recovery was complete in two months. In other respects the past history was negative, except for a tendency to attacks of bronchitis followed by mild asthma.

On September 18, 1927, he was bitten on the arm by a "police" dog. There was some difficulty in locating the animal, so that it was not until September 22d that the report was received that the dog's brain showed Negri bodies. The first injection of rabies virus vaccine was given on that date.

The night after the thirteenth injection (October 4th), the child had been feverish and showed definite malaise, so the last injection was omitted on the fifth. No definite cause for the condition could be found. On the night of the fifth there was no fever, so the last injection was given on October 6th. That night the child was feverish again, and the mother thought that he was unusually drowsy. On October 7th the tendency to sleep continued. There was complete anorexia, but the temperature was only 99°. On October 8th the neck was slightly rigid, the limbs relaxed, pupils normal, reflexes not exaggerated, but the lethargy had increased. A spinal tap showed a pressure of 15 mm. of mercury, the fluid was clear, with eleven cells per cu. mm., chiefly lymphocytes with no organisms. The sugar reaction and globulin were normal. That night he became distinctly agitated and delirious, with marked rigidity of the neck, and was admitted to the Children's Hospital with a temperature of 99.2° and pulse 120.

There was marked spasticity of the neck, back, and limbs, with exaggerated reflexes and distinct tremors of the lips, with twitching of the arms and hands but no actual convulsion. He was semistuporous on the 9th. The blood count showed normal figures except for 16,600 leukocytes, and the urine was normal. The general condition was unchanged, but the temperature rose to 102.2° in the evening.

For the next two days the temperature ranged from 99.2° to 104°. The neurologic examination showed normal pupillary and extra-ocular movements, general rigidity, twitching of the left hand, and slight weakness in the distribution of the left 7th nerve, knee jerks exaggerated, but no clonus or Babinski. There was obstinate constipation, the respirations were somewhat stertorous, and sweating was pronounced. There was complete loss of consciousness.

On October 12th the temperature did not exceed 99.2°. There was a rather sudden return of consciousness, and the spastic symptoms were much less. On October 13th the reflexes were still exaggerated, but prostration replaced spasticity. From that point on recovery was uneventful, and he left the hospital on October 22d. During his convalescence it was noted that his speech was distinctly thick, but there was never any definite paralysis.

I have not touched upon the question of treatment, since it is outside the scope of this paper. However, I may mention that treatment should be directed more towards the origin of the toxemia when this is possible. The majority of the infections named have their own indications for treatment. The possibility of reducing intracranial pressure by lumbar puncture, cisternal puncture, or by hypertonic solutions should always be kept in mind.

SUMMARY AND CONCLUSION

Five cases have been discussed, representative of a group which from the symptoms, signs, and pathologic findings may be described by a single term, "encephalosis," a toxic degeneration of the brain tissue, due to a variety of acute infections associated with toxemia. The five cases belong to a group which has been classified formerly under the term acute toxic encephalitis, or under other terms less appropriate.

From the clinical standpoint two questions remain for solution before the theory of a purely toxic process can be accepted:

(1) The interval which so often occurs between the height of the acute infectious disease and the height of the acute encephalosis which follows must be further explained.

(2) A further explanation should also be found for the fever with the rapidly shifting signs and symptoms usually associated with an acute infection; all in a process which is supposed by pathologists to be purely degenerative, and which may occur at a variable time after the acute symptoms of the primary disease.

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ABSTRACT OF DISCUSSION

Of Symposium on Encephalitis

MAX H. WEINBERG, M.D. (Pittsburgh, Pa.): The clinician, in his everyday work, finds it very difficult to think in terms of the microscope. Dr. Winkelman has not told the whole truth when he says he has been trained along pathologic lines only, because he has done a great deal of clinical work as well. It is good advice to all of us to bear the microscope in mind, because it helps us, who are mainly in the wards, to understand such conditions a great deal better. We should not rely solely upon the development of symptoms as the common consideration for a basis of the disease itself. A consideration of the constitutional factor is necessary in these patients; otherwise we should have a great many more cases of encephalitis.

I do not know whether it is a wise plan to stress symptoms or groups of symptoms as such. It is best to bear in mind that the brain is not a single organ, rather that it is composed of many organs, and symptoms would depend upon the severity of the process in a particular part of the brain. This helps us to understand encephalitis; otherwise, if we are to look for certain

groups of symptoms only, we are apt to overlook other cases which may show a different set of cerebral or cord symptoms.

During the past two years we have seen two cases of encephalitis following vaccination. One was in a girl of four. One of her difficulties was a practically complete loss of speech, and she did not recover this for four months. Another was a complete change in personality. Instead of being a docile child, she became extremely unruly. She recovered. Another case of encephalitis, following vaccination in a child of three years, terminated in death about four weeks after the onset of the condition.

The question of treatment interests us a great deal. As we learn more and more of the brain, we come to rely more upon lumbar puncture as a therapeutic as well as diagnostic aid. Recently we saw a middle-aged woman suffering with pernicious anemia. She developed a temperature of 106°. It was obvious that we were dealing with a medullary-compression syndrome, probably following edema of the brain. A lumbar puncture was done, and the temperature was reduced three degrees immediately. Unfortunately the patient died four days later.

J. GIBSON LOGUE, M.D. (Williamsport, Pa.): I am wondering about hydration, and whether or not we are clinically on dangerous ground when we routinely force fluids. That is a practical point which could be taken up by the pediatrician.

FRANCIS T. O'DONNELL, M.D. (Wilkes-Barre, Pa.): I should like to ask which method is preferred in giving fluids, hypodermoclysis or enteroclysis; and also if the essayists have tried hypotonic salt solutions.

ERNEST G. KUHLMAN, M.D. (Pittsburgh, Pa.): What has just been said in regard to the occurrence of encephalitis following vaccination seems to be excellent propaganda for the antivaccinationists. I recall having read a paper, published by a group of physicians in New England, which mentioned the occurrence of encephalitis following vaccination. There was a fairly high mortality. Since the reading of this paper, other articles have appeared dealing with the same subject.

When I am called upon to vaccinate a child, the question always arises, will such a complication follow, and if so, would it not have been better to allow the child to face the possibility of taking smallpox? I should like to ask how frequently postvaccination encephalitis occurs.

NATHANIEL W. WINKELMAN, M.D. (Philadelphia, Pa.): In reply to Dr. Logue's question regarding forced fluids, we feel that in many conditions the patient can be made much worse than he would be from the original disease. However, if necessary, do not hesitate to drain the spinal canal.

Routinely, our orders are that, if fluids are forced, drain the spinal canal and do so four or five times a day. It is very hard on the patient, but the results are good. The bad results we have had came from excess fluids. The method of giving fluids depends upon how quickly results are desired.

With regard to smallpox vaccination, I should say that when the vaccination statistics are considered, I would take my chance with vaccination rather than smallpox.

JOSEPH STOKES, JR., M.D. (Philadelphia, Pa.): There has been a good deal of discussion concerning the relationship of the pathologic and clinical findings. From a clinical standpoint it is difficult to conceive of this disease picture as being entirely a degenerative process, since an interval of two weeks elapses without symptoms before its sudden stormy onset. Its marked febrile progress with signs and symptoms shifting from one part of the body to another, ending often in an equally rapid subsidence, is not characteristic of degenerative processes.

This condition may be a virus infection, as has been mentioned, and certain cases vaccinated against smallpox may be more susceptible to this virus, and may be inoculated with this virus at the time of vaccination.

I feel that the term "encephalosis" is of great assistance to both clinicians and pathologists in helping to differentiate this condition from the conglomerate group called "encephalitis."

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*Symposium On Urologic Diagnosis**

THE VALUE OF CYSTOSCOPY TO UROLOGY

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The specialty of urology is most fortunate to have for its diagnostic aid such an instrument of precision as the cystoscope. In fact, the enormous strides in this specialty date from the demonstration of a practical cystoscope. It has been since this time that the definite classification and diagnosis of distinct diseases of the urinary tract have been possible.

Accurate visual diagnosis can be made of lesions of the bladder, including the vesical neck and the posterior urethra. The lesions of the upper urinary tract must, of course, be diagnosed by context, and in addition, the survey must be completed by making the ordinary x-ray study of the urinary tract and by pyelography.

Cystoscopy has become such a fixed requirement that bladder or kidney surgery at the present time is never attempted without it, if it is at all practical. This last clause is inserted to recall to memory the major contraindications to cystoscopy, for so often a urologist, in his interest and zeal, will ignore conditions which make cystoscopy inadvisable, and the reaction of the patient practically outweighs the information obtained. One must take into account, also, the various lesions without the urinary tract which produce urologic symptoms and can be definitely excluded only by cystoscopy and its refinements. Here we have in mind the various conditions involving the lower abdominal quadrants which are obviously mostly gynecologic. The lesions of the bladder and posterior urethra which can be ascertained by cystoscopy are

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numerous and well known to every one, and there is no need to go into detail. The most important thought to be imparted is that the cystoscope enables us to see these lesions and treat them accordingly, whereas without its aid we should still be in the stage of treating symptoms. I need mention only one of the most essential of these; namely, hematuria, which can proceed from a minor and insignificant source or can be due to a most malignant lesion.

Another thought which should be impressed is that all of the information necessary to make a conclusive diagnosis cannot in every case be gained in a single cystoscopic study. This is a point which frequently causes some impatience on the part of the general surgeon or internist. However, careful and detailed study yields a more accurate opinion and is later appreciated by these same critics.

I find that a large part of the hesitation to recommend cystoscopic study to the patient is due to the fact that both members of the profession and the laity have exaggerated ideas of the discomfort produced. In fact, I have known physicians who advised their patients that they would experience a very painful ordeal, inducing in them a mental state similar to that which would be produced by discussion of a major surgical procedure. The patients themselves, particularly the males, of course, in discussing the examination to their friends, must necessarily make it appear as though they had been through quite an ordeal. The more awful the description, the more satisfactory the reaction observed in their audience. Thus cystoscopy becomes quite dreadful.

A few practical suggestions which may seem quite obvious are worth while keeping in mind and do a great deal to lessen some of the opposition:

(1) Use a local anesthetic. Quite efficient for this purpose is a four-per-cent solution of novocain or procain. This, after being injected into the anterior urethra, must be massaged back into the posterior urethra while the meatus is held shut, and five minutes allowed before instrumentation.

(2) Do not use a cystoscope which puts the urethral meatus at a great tension. The size eighteen French cystoscope can be used routinely in males, and will deliver all the information desired except in those cases in which it is necessary to catheterize both ureters or there are indications for the operating cystoscope.

(3) Let the introduction of the instrument be gradual and most gentle.

(4) With the cystoscope in situ, avoid any hasty or violent twisting of the instrument. The bladder may be viewed just as satisfactorily by gradual and easy manipulation.

(5) Do not keep the cystoscope in the bladder any longer than is absolutely necessary. It is better to make a partial examination than to keep the patient so long on the table that his discomfort becomes wearing and the bladder spasmodic. We all know of instances in which for catheterization of the ureters and collection of urine the instrument has been kept in the bladder for three or four hours. Another suggestion here is that after catheterizing the ureter it is greatly appreciated by the patient if the cystoscope is removed and only the catheters are left in place.

(6) Always remember that the two most sensitive portions of the tract through which the cystoscope passes are the urethral meatus and the vesical neck.

It has been attempted to keep the thoughts presented in this brief paper as general as possible, for if we were to go into detail, we should soon be overwhelmed by the various indications and contraindications in each condition. Cystoscopy must be considered first and last as purely an adjunct to the diagnosis of a lesion, but there is no examining method so conclusive or accurate in its findings.

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THE USES AND LIMITATIONS OF THE X-RAYS IN UROLOGY

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When, in 1895, the x-rays were first discovered, it was found that they would penetrate the human tissues. Speculation immediately became rife as to their value in making examination of the bones in the living body, and as to the possibility of localizing foreign opaque substances within the living tissues. Urologists, for example, sought to use the rays to diagnose the presence of calculi in the urinary tract. MacIntyre, of Glasgow, in 1896, reported the first case in which they were successfully employed for this purpose. A new method of diagnosis had been introduced, and although the advance was slow at first, it has been steadily progressive.

In 1905, Fenwick made the statement that "the interpretation of radiographic shadows is still in its infancy." And, in 1909, Cunningham remarked that "previous to the employment of the Roentgen ray as a means of detecting calculi, the error in diagnosis between stones in the kidney and the ureter was great because of the similarity of the symptoms. The employment of the Roentgen ray has been of the greatest

value in the diagnosis. This method, however, involves a considerable error, the error being twofold: first, the inability to detect pure uric-acid or urate calculi; and second, the presence of questionable shadows in or near the course of the ureter." It has been found that the density of the shadow cast by a calculus depends largely on the specific gravity of the substances of which it is composed. With present-day technic, very few stones are missed. However, even a fairly large calculus composed of pure uric acid may fail to produce a shadow.

Small stones lying directly in line with a rib are also hard to distinguish, but stereoscopic films will bring out such stones. Particles of barium remaining in the intestines after a gastrointestinal examination may cause confusion, as may fecaliths in the appendix or elsewhere. Gas in the intestine also renders a diagnosis difficult.

Questionable shadows in or near the course of the ureters may be caused by calcified lymph nodes, calcified mesenteric glands, calcified areas in renal or other tumors, the incrustation of renal tuberculosis, calcified bodies in the muscle fascia, selerotic artery, accentuated calcification in the transverse processes of the vertebræ, etc. Gall stones always have to be considered with the appearance of unusual shadows in the region of the right kidney. Moles on the skin may cast shadows which must be differentiated from those of urinary calculi.

A roentgenogram with opaque catheters in place will show the relation of the ureters to the doubtful shadows and will make a diagnosis possible. Sometimes a stereoroentgenogram is necessary. Pyelograms should usually be made. They give further evidence as to the existence of hydronephrosis or other pelvic deformities. Lateral views of the injected kidney may help in the differential diagnosis of shadows in the kidney areas, e. g., the gall stones. The pyelogram may also disclose the presence of a hydroureter or of abnormal kinking. The degree of kinking is best shown by stereoscopic films for, in the single film, even a simple curve in the ureter may assume the appearance of a sharp bend.

Nephroptosis or movable kidney may be diagnosed by palpation and confirmed by pyelograms made in both the horizontal and the vertical position.

From the roentgenogram one may judge of the shape and size of a stone. In considering this latter point, allowance must be made for some distortion caused by the divergence of the rays. Films, taken at intervals, may show whether a stone is stationary or is moving down or up the ureter, or within the kidney pelvis.

Vesical calculi may be formed in the bladder or be carried there from the kidneys or prostate. If a cystoscope can be passed and vision is clear, the diagnosis is readily made. However, if the calculus is extravesical, hidden within a pouch, or behind prostatic lobes, the roentgenogram is of the greatest value. It is likewise of value in determining the size of a calculus and the probability of its passing through the lower end of the ureter, or from the urethra.

It is an error to regard every opacity in the bladder region as a stone. Such may result from: scybala, intestinal calculi, foreign bodies in the intestine or bladder, calcification in the walls of pelvic arteries, phleboliths of the pelvic veins, calcification of the retroperitoneal glands, foreign bodies in the vagina or uterus, calcification of uterine myoma, dermoid cysts, etc.

The plain roentgenogram aids greatly in distinguishing a calculus from tumor of the kidney. The pyelogram is of even greater diagnostic importance, more especially as most renal neoplasms tend to invade the pelvis, thus producing a filling defect in the pelvic outline. The pyelogram is of the greatest value, also, in the differential diagnosis of solitary cysts and of juxtarenal tumors. In the presence of symptoms of malignancy, an enlarged and irregular outline of the ureter will indicate the position of a neoplastic growth.

Bladder tumors may be pedunculated, sessile, or infiltrating. While the cystoscope is usually sufficient to make the diagnosis, the roentgenogram is often of great value in showing the intravesical character of the neoplasm, especially where cystoscopy is difficult or impossible.

A roentgenogram should first be made with the bladder distended with air. This is followed by another with the bladder filled with an opaque solution. By so doing, abnormalities in the outline of the bladder or irregularities in the density of the bladder shadow will indicate the position and size of the lesion. Diverticula of the bladder may also be shown by these methods. After making the cystogram, most of the opaque fluid should be drawn out through the catheter or the patient allowed to urinate, and another cystogram made. By so doing, diverticula of the anterior or posterior walls may be shown which would otherwise remain obscured by the presence of the opaque fluid in the bladder. Lateral views may also be necessary to demonstrate the presence of such diverticula.

Most of the pitfalls to be avoided in this work have been considered in the course of these remarks. It remains but to stress the importance of, first, the thorough and intelligent preparation of the patient (compound licorice powder

or castor oil the night before, and a high soapsuds enema immediately before examination, when not contraindicated); and second, the careful immobilization of the patient's abdomen while making the roentgenogram.

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THE VALUE OF THE LABORATORY TO UROLOGY

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Although generally accepted urologic facts acquired by a most painstaking history, physical examination, and use of instruments of precision are invaluable, the application of laboratory methods enables urologists to study more closely the various phases of urology. It is to be particularly emphasized that laboratory procedures may go hand in hand with the more direct clinical examination of the patient, as the former can be interpreted only in the light of the latter. Notwithstanding that in some cases the laboratory findings may be of even more value than those of physical examination, it should be obvious that the function of the clinical laboratory is more largely, perhaps, an accessory one. The application of methods of physical diagnosis ordinarily indicates a successful solution of the clinical problem by special laboratory methods, which yield numerous confirmatory or differential facts not at all clearly defined by the method of direct clinical examination.

Experience has taught that no laboratory method, no matter how exact it may be or how sound its basic principle, will yield reliable results in the hands of the inexperienced. On the other hand, the urologist must be able to interpret and correlate the laboratory findings with the clinical studies.

With the exception of the perfection of cystoscopic investigation, the refinement of kidney function by Geraghty and Rowntree[1] has added more to the advancement of urologic surgery than any other step. The studies in blood chemistry in relation to urology by Gradwohl and Scherk was another step forward. The advancement[2] has resulted not from the fact that a tuberculous kidney can be removed by a skillful operation, but because early diagnosis of the lesion is possible, a study of the urinary tract is made, and, with a thorough understanding of the disease, the treatment is carried out for a cure.

To determine the qualification of the patient for surgical intervention on the kidney, bladder, prostate, or other part of the genito-urinary tract, and as regards postoperative progress—questions of eminent concern to the surgeon—a simple renal test for both surgeon and patient to perform, and at the same time accurate and delicate enough to demonstrate clearly the degree of damage to the kidney parenchyma, should be considered. These tests, being simple and comparatively easy of performance, should be made at frequent intervals, since it is far more valuable to know the rate of progress the patient is making, and is capable of, than to know what the kidneys are doing at any particular time.

On the Continent, the Ambard[3]-McLean[4] constant, an expression of the ratio between the urea concentration in the blood and the amount eliminated in the urine in a given period of time, is less frequently used than heretofore. We are today relying on the determination of blood urea, the most important metabolite of nitrogenous metabolism for the estimation of the state of general protein metabolism, and the phenolsulphonephthalein test for the estimation of total or combined kidney function.

Recently VanSlyke[5] and his coworkers, following the work of Addis[6] and of McLean and DeWesselow,[7] relative to the importance of urine volume or the excretion rate of urea, have pointed out the "augmentation limit"; namely, 2 c.c. per minute in adults. When the urine volume falls below the augmentation limit, the urea excretion rate also falls, and is proportionate to the square root of the volume. So long as the urine volume output remains above the augmentation limit, the urea excretion proceeds at a maximum speed and the output per minute represents the urea content of a maximum blood volume. This blood volume averages normally about 75 c.c. per minute, and is termed the maximum blood-urea clearance, or simply the maximum clearance. Thus, when the urine volume is below the augmentation limit the following formula has been evolved: Standard clearance $C_S = \frac{U}{B\sqrt{v}}$. The efficiency and popularity of this test remains to be demonstrated.

The urea salivary index proposed by Hench,[8] in our experience with a series of fifty cases, checked with urea-nitrogen determinations. The values approximately doubled and ran a constant parallel with the blood-urea findings. While this test proved to be as reliable as the blood-urea-nitrogen test, the time required was about the same. In the absence, however, of the special equipment for the latter and a marked degree of dehydration, the former commends itself.

The urea-nitrogen test, because of its sim-

plicity and dependability, has surpassed the total nonprotein nitrogen in most clinics. Blood for this test should be collected on a fasting stomach, with average fluid intake, preferably in the morning before breakfast. Normal values range from 10 to 20 milligrams per 100 c.c. of blood. Values between 20 and 30 are not so satisfactory, but, in themselves, do not preclude surgical intervention. Figures above 30 either contraindicate major surgical intervention or cause it to be regarded with grave concern.

The CO_2 combining power of the blood plasma emphasizes the importance of a determination of the bicarbonate as a criterion of the degree of acidosis and alkalosis and the therapeutic indications. It is not difficult to perform, and the information obtained is invaluable to the surgeon for best management of his patient. Normal figures approximate 44 to 52. Lower figures indicate acidosis, higher ones alkalosis.

The phenolsulphonephthalein test is supreme among the tests of renal function merely for practical reasons. The technic of this test, either intramuscularly, subcutaneously, or intravenously, is too well known to require description. Suffice it to say, whether by the technic of its introducers, merely as a quantitative determinator, or preferably by the index of elimination, as suggested by Thomas,[9] or by the curve of elimination and fractional methods, as recommended subsequently by Shaw[10] and Ockerblod,[11] this test serves to estimate the total or combined kidney function. The appearance time may be as early as two minutes. Quantitatively, 60 to 80 per cent is eliminated in one hour after intravenous injection.

Urinalysis is not only one of the most important features of clinical diagnosis, but may be considered the foundation of urology. Failure to possess a complete and intimate knowledge of this phase of the subject, as practiced in the laboratory and in the clinic, would render diagnosis of disease of the urinary organs most difficult. The skillful management of urinalysis may be considered as twofold: laboratory urinalysis and clinical urinalysis.

(1) Laboratory urinalysis. The laboratory should be an integral part of the equipment of the urologist, as he should be competent to subject the urine to the tests of peculiar interest to urology—physical, chemical, and microscopic examinations.

The selection of the specimen is of immense importance. If the patient's history, general health, and the examination of a single specimen warrant the opinion that the kidneys are sound, a twenty-four-hour specimen is not necessary. Primarily, the urologist is chiefly interested in the bacterial and cellular content of the urine; hence the specimen for microscopic examination must be obtained direct from the bladder, particularly in women.

In general, the degree of acidity bears a relation to the specific gravity and quality of the urine excreted. The normal urine, acid in reaction, varies according to the time of day, diet, physical and mental activity, defective metabolism, and the presence of febrile conditions.

The specific gravity varies according to the proportion of solids to the total liquid, and, as stated above, the variations in specific gravity and acidity are dependent more or less upon the same conditions. An elimination of these few properties for a considerable period may cause irritation of the urethra or bladder.

The presence of albumin in the urine offers much concern to both the internist and urologist. Time was when we regarded the mere presence of albumin in the urine as indicative of a kidney lesion, but we know that a careful clinical examination is necessary before a diagnosis is possible. It is often fatally misleading to state that the "albumin is accounted for by pus," as nephritis and a lesion of the lower urinary tract may exist at the same time. Usually the appearance in urine of one tenth of one per cent of albumin (by weight) means nephritis.

Owing to the wide variability of the renal threshold in diabetes mellitus, the value of examination of the urine for sugar has been largely supplemented by blood-sugar determination, for best management of the patient, pre- and postoperatively. In a series of five cases, the blood sugar, taken on a fasting stomach, has ranged from 160 to 243 milligrams per 100 c.c. of blood without a coexisting glycosuria. Therefore, any attempt to arrange the appropriate dose of insulin in accordance with the urinary findings would forestall immediate standardization and predispose to infection, tissue necrosis, and difficulties of wound healing.

Due to rapid disintegration of casts, epithelial cells, and other elements as a result of decomposition, the specimen of urine should be examined microscopically soon after voiding, preferably by means of an electric centrifuge with a speed of 2,000 to 4,000 revolutions per minute for three minutes or fifteen minutes. If the presence of tuberculosis bacilli is suspected, it will suffice to gravitate the sediment. A drop of this sediment by means of a fine pipette is placed on a microscopic slide and covered with a cover glass. For urinary material the low- and medium-power objectives are used, and for bacteriologic work an oil emulsion is necessary.

Red blood cells in fresh urine, as a rule, are

unaltered in shape and appear not unlike a biconcave disk of a slightly yellowish hue. When changed by urine their borders become irregular or crenated. They occur in the urinary sediment with various elements, according to the nature and location of the causative factor.

Pus cells are about twice the size of red blood cells, round, granular, containing one or more nuclei. The addition of a little Gram solution will give a dark brown color to pus cells, while the epithelial cells turn light yellow. In alkaline urine, pus cells swell to a globular shape, or may rupture and coalesce in a state of decomposition. Pus cells are found associated with the characteristic epithelia of the region of the urinary tract involved, and form most of the urinary sediments. Those from the kidney show a tendency to massing or clumping, while those from the lower urinary tract appear as discrete bodies. The above facts are of use in accumulating diagnostic data.

Renal casts are of interest to the urologist from the standpoint of etiology, diagnosis, and treatment in some unilateral lesions of the kidneys. Hyaline casts, accompanied by cells from the tubules of the kidney, indicate inflammation of the kidney of an acute degree; granular casts, the more chronic forms of renal disease; and waxy and fatty casts, a still more advanced stage.

Casts of red blood cells indicate hemorrhage in the kidney. Fresh blood cells occurring in quantities, without renal elements, but with bladder epithelia, indicate vesical hemorrhage. Pus cells, with cells from the pelvis or renal tubules, signify suppuration in the kidney, pyelitis, or pyelonephritis. Pus cells in large numbers, with bladder or urethral epithelium, are evidence of cystitis or urethritis. The addition of triple-phosphate crystals denotes chronic cystitis, with partial or complete retention of urine. In addition to the above elements, there may be found mixed and special forms of pathogenic bacteria, indicating the nature and cause of the inflammatory lesion.

Examination[12] of the urine for bacteria should be made only upon specimens obtained with the greatest possible precaution and preserved in absolutely sterile vessels. For a preliminary examination, Löffler's methylene-blue solution, which stains the majority of organisms, may be used. If the gonococcus is suspected the Gram method is preferable. For the tubercle bacillus the urine is tested in the same way as the sputum, and stained with carbolfuchsin solution. When not positive of the proper collection of urine, the smegma bacillus must be kept in mind. The tubercle bacillus may not be found by microscopic examination even after repeated attempts, and in this case resort to guinea-pig inoculation with the washed urinary sediment should be considered.

The finding of tubercle bacilli[13] in the urine does not necessarily indicate tuberculosis along the genito-urinary tract, as this may occur in miliary tuberculosis and cases have been reported in pulmonary tuberculosis. On the other hand, if numerous pus and blood cells be present along with tubercle bacilli, the diagnosis is usually correct.

(2) Clinical urinalysis consists in "looking at the urine" recently passed, about 60 c.c. into a clear, large tumbler, and the remainder into another. With the tumblers against a strong light, examine closely for any speck or cloud, as none of them are too insignificant for close scrutiny, and begin to draw tentative conclusions, realizing that these conclusions are not final, but only momentous hints.

Then by means of the acetic- or nitric-acid tests, the organic contents, consisting of pus, blood, bacteria, etc., which are often obscured by crystalline substances, phosphates, and urates held in suspension, may be differentiated. The first urine passed may be interpreted as the urine which lay in the bladder plus what it has swept from the urethral walls. The second urine is that which lay in the bladder without admixture of anything gathered from the urethra during its exit.

In summary, the results of the above methods of clinical analysis are directly proportionate to the skill of the examiner. He should be able at a glance to distinguish slight variation in the amount and quality of pus, blood, or shreds present. Such is of the greatest use for the prognosis from day to day, but as a diagnostic test of the nature of the disease it is of less value.

SUMMARY

In conclusion, the following may be emphasized: (1) that laboratory tests supplement but are not intended to replace clinical observation; (2) that the additional information accumulated from laboratory tests is indispensable; (3) that no individual laboratory test is conclusive; (4) that where these tests are simply more evidence obtained in completing the clinical picture one is trying to construct of the patient, their real value will be comprehended.

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ABSTRACT OF DISCUSSION

Of Symposium on Urologic Diagnosis

PERCY S. PELOUZE, M.D. (Philadelphia, Pa.): It is probably safe to say that not more than a tenth of the patients who need cystoscopy ever get it, doubtless largely due to the fact that urologists have not shown other practitioners that the performance is rarely a grave procedure and not a painful ordeal in gentle hands. In some cases it is contraindicated, of course, and for this reason should not be regarded as a routine method.

Pyelography should be used only as a last resort, and should be avoided when possible. I have seen patients hurried into emergency operations by pyelography, and I know of some deaths from this procedure alone as well as from operations it necessitated.

The urologist who does not do most of his own microscopic work is at a disadvantage. If he cannot do it himself, it should be done under his observation. If specimens of catheterized kidney urines are sent to a laboratory, explicit directions should accompany them, for many laboratories consider that a specimen in a test tube is intended for culture alone, whereas its cellular content may be the most important part of the study. Too much reliance cannot be placed upon a report of pus cells, as the small, round epithelial cells found in every catheterized specimen of kidney urine frequently are mistaken for pus cells. I have known this error to be made a number of times and to lead to unfortunate mistakes in diagnosis.

The importance of preceding every bladder and upper-urinary-tract study by at least a microscopic study of the voided urine cannot be too greatly stressed, as the internist usually relies upon his technician for this study, and very important things are sometimes overlooked. On at least five occasions I have been led to the discovery of glycosuria by the finding of yeast cells in the freshly voided urine or in vulvar or preputial smears. Also, infestation of the male urethra and prostate with the *Trichomonas vaginalis* occurs at times, and can be diagnosed only by the microscopic examination of the fresh secretions.

EDWARD L. KEYES, M.D. (New York, N. Y.): Since certain patients think that the cystoscopies they have experienced at other hands were major operations, it may be of interest to describe the method by which I induce them to submit to cystoscopy. First I give ten grains of veronal—an excellent drug for soothing people without necessitating a hypodermic. Next I talk to them at considerable length until their minds become peaceful. Then I administer sacral anesthesia and proceed to cystoscopy and sometimes even to pyelography. The latter should not be done unless the patient is at peace, and no more than 5 c.c. of fluid should be injected.

THE RIGIDITY OF DIAGNOSTIC CRITERIA IN DERMATOLOGY*†

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Something more than half a century has elapsed since the establishment of dermatology as a special field of general medicine. The development of specialties in general has come about rather slowly, receiving an impetus from the great epochs of modern medicine—notably the rational pathology of the Virchow school and the advent into the theory and practice of medicine of modern bacteriology.

Dermatology, it would seem, has developed somewhat differently from other specialties. Our field did not develop gradually, but was rather abruptly established as a result of the classification of dermatoses based by the early founders of the Vienna school upon purely morphologic characteristics. This has resulted, among other things, in the development of a cumbersome, awkward, and somewhat irrational nomenclature. The interpretation of these morphologic pictures, following the nomenclature, led away rather than toward the concept of general morbid processes, with the result that up to a couple of decades ago dermatology stood out as a field with its own peculiar pathology, and with an ever-widening breach between it and the morbid processes which affect other systems than the skin.

The dermatologists of an earlier day, therefore, became expert diagnosticians of disease entities for which an awkward name existed, and for which, for the most part, they had no adequate explanation. A science based upon entirely superficial characteristics, of course, could not endure long as such. Happily, the past two decades have seen a tremendous change in the interpretation of disease processes as they occur in the skin: first, with the recognition that the integument is an organ of fundamental importance concerned not only with the regulation of temperature, the protection of vital structures, and as an excretory and secretory organ, but more particularly with the newer concept that it reflects admirably, and is intimately concerned with pathologic processes as they affect other body structures.

For the sake not only of the general practitioner, but also of the specialist in cutaneous

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medicine, it would have been far better had our field developed from this concept rather than as a result of the designation of cutaneous diseases based upon morphologic changes.

However radically we have had to change our ideas concerning the interpretation of disease as it is portrayed in the skin, it is, of course, too late to attempt a radical change in nomenclature. Fifty years of employment have established for the names of cutaneous diseases a usage which we must continue. Additional names to an already overburdened nomenclature should be, I think, sedulously avoided. Where absolutely necessary, they should conform to the accepted medical terminology, and not be a mixture descriptive of color, clinical course, and pathology.

The rapid development which we are seeing in dermatology as a science, as well as in its practice as an art, requires somewhat different prerequisites and qualifications for successful practice from those of an earlier day. Dermatologic diagnosis is far more difficult today than before, and gives promise of becoming even more so in the future. The successful interpretation of cutaneous disease in the light of more modern views, and coincident with the ever-changing trend of medicine toward the biochemical and biophysical explanation of disease phenomena, necessitates an ever-changing background of knowledge. The successful treatment, moreover, of diseases of the skin is no longer solely dependent upon an intricate knowledge of the pharmacologic action of drugs, but involves physical agents whose therapeutic indication and contraindication require a fairly comprehensive knowledge of their biophysical properties.

Cutaneous medicine, according to its modern concept, concerns itself with the aspect of the skin as a great organ which admirably reflects disease processes elsewhere in the body in a great variety of ways. Apart from parasitic diseases and certain peculiar benign and malignant tumors of the skin, there are but few essential dermatoses. The proper interpretation of cutaneous pictures and the recognition of their significance to underlying disease processes has become far more important than the effort to establish them as discrete entities based on gross morphology. This point is admirably illustrated in the present interpretation of the septic and toxic erythemas, in the exudative diatheses, including eczema, and in the cutaneous pictures associated with petechiæ and hemorrhage. The recognition of erythema nodosum as an embolic process frequently associated with the sepsis of rheumatic fever, of urticaria and eczema as occasionally explainable on the basis of enteric sensitization, are but a few examples of many in which the cutaneous pictures have been realigned to the underlying constitutional conditions from which for many years they were separated.

Modern bacteriology, as in other fields, has furnished our specialty with an adequate and sound etiologic basis for many so-called essential dermatoses. The various pictures caused by the streptococcus, the tubercle bacillus, other organisms, and even filtrable viruses have cleared up many hitherto etiologically obscure conditions.

Perhaps the most recent accession to our knowledge in the interpretation of many disease phenomena lies in the application of the theory of allergy and sensitization to the etiology of many dermatoses previously unknown. Research in these fields has cleared up many conditions previously ascribed to such vague terms as idiosyncrasy and susceptibility, and doubtless will lead to further clarification of symptom complexes which are still obscure.

I believe that I have adequately shown why successful modern dermatologic practice is more difficult than it has been in the past and is becoming increasingly so.

Given a proper background and an open mind, there remains still another factor which complicates the proper interpretation of disease, not only for the beginner, but which exists at all times for the experienced clinician. This factor I should like to refer to as the rigidity of diagnostic criteria. By this phrase, I mean to refer to the clear-cut textbook picture of a disease as it is first described and by necessity incorporated into medical texts and into the classroom, and thence shows a tendency to fix itself securely in the clinical mind.

Obviously, unless a morbid condition is capable of certain clean-cut differentiated characteristics, it is difficult to establish as an entity. We must, therefore, have in our minds at all times a certain framework which characterizes a particular disease and which enables us to recognize it.

In general medical and surgical diagnosis, symptoms of disease, and more frequently signs, are occult rather than visible changes. They affect viscera which are brought to light only with relative inaccuracy by the palpating finger, the stethoscope, and the x-ray. For the interpretation of such signs and symptoms, therefore, a certain amount of what may be called healthy speculation is necessary for the successful clinician to establish his diagnosis. The great clinicians of the past and those of the present have built up an experience of morbid processes by the cultivation of a spirit of speculative diagnosis. Their ability to recognize disease de-

pended not so much upon the close observance of typical cases as on a profound study of the atypical variants of disease entities. One obscure type of a disease has far more teaching value for the practitioner than many textbook examples. The ability, therefore, to diagnose disease in its unusual forms will always distinguish the discerning, observant clinician from the one who clings to the original descriptive picture and to rigid criteria of diagnosis.

It would be perhaps quite natural to expect that with everything exposed to the eye, the problems of cutaneous diagnosis would be infinitely more simple than those in which the disease phenomena are hidden, and that, given a knowledge and experience of the diverse morphologic pictures seen in the skin, the diagnosis of cutaneous disease would be a simple matter.

That such a supposition is far from the truth is attested by the paradox that, with everything to see before his eyes, the average practitioner, skilled in other fields which excite his speculative sense, is quite lost when confronted with a diagnosis of a skin disease. In no other organ are disease processes so capable of infinite mutation as in the skin. Many things, of course, enter into the mutative factors. In the first place, we see the same disease presenting itself in slightly different form, depending upon its geographical distribution. How admirably is this illustrated in the various types of skin tuberculosis as these are seen on the continent of Europe on the one hand, and in our country on the other. The open and ulcerative forms of tuberculosis as they occur in Europe make of our dry, nonulcerative forms occasional difficulties in diagnosis for the European-trained clinician. The more unusual forms of tuberculosis, such as the sarcoid tumor and the various tuberculids, are strikingly more frequent in our country than in Europe, although the incidence of skin tuberculosis is far greater in European countries than in our own.

What applies to tuberculosis can also be said of many other diseases. Even so protean a disease as syphilis is subject to considerable variation, dependent upon the country in which it is seen and studied. These geographical considerations are not only intimately concerned with climatic condition, but they also depend undoubtedly upon such factors as habits of living and racial backgrounds.

The need for additional flexibility in the diagnostic criteria of a disease lies, moreover, in the singular fact that the same disease not infrequently changes its character from year to year. This is well illustrated in the exchange of views during the past two years with reference to the changing character of pityriasis rosea. But a few years ago this disease followed perhaps more closely a unique and more easily recognizable course than any other. Occurring commonly in more or less epidemic form in spring and fall, and running an almost uniformly benign course for a few weeks, it stood out as a striking example of a disease with but few unusual variants. This has completely changed within the past few years. No longer is pityriasis rosea epidemic in spring and fall, but in our country, at least, it is seen at all times of the year. Two years ago, I think, saw the disease in its most severe form. Not only did the cases vary individually in their gross appearance and onset, and deviate widely from the accepted textbook picture, but many of them were severe, lasted much longer than the usual time, and even incapacitated for the time being the affected individual. This cycle of mutation in a disease which previously adhered fairly definitely to uniform diagnostic criteria resulted in the failure of recognition of many of the cases and, of course, in their maltreatment.

Our journals and the proceedings of our many dermatologic societies illustrate, I think, very fully how widely divergent are the views of well-equipped men with regard to the interpretation of disease phenomena when such do not conform to the common or usual type. Many useless forensic debates concerning the identity of a given disease might, I think, be avoided if by conscious effort we cultivated the idea of elasticity of diagnostic criteria to include in our concept of a disease its many possible variants rather than to look in each case for its typical example.

How frequently are we unwilling to diagnose a disease which we associate with a certain part of the body when this disease occurs elsewhere. Lichen planus of the mouth, an admittedly frequent complication of this interesting disease, was with difficulty established as occurring in the mouth alone under occasional circumstances. Within recent months a case of this disease was demonstrated, and doubt as to its identity was expressed by some because of the presence of typical lichen planus lesions in the scalp—an admittedly unusual place for them. Great difficulty, it would appear, is occasionally associated with the diagnosis and differentiation of the scaly erythrodermias. Thus, for example, the guttate form of a parapsoriasis and the form en placques seem readily diagnosable when seen alone, but their occurrence together in the same individual frequently leads to a diagnosis of some other condition or to a failure to diagnose the disease at all.

The parallel might be carried into practically every disease of the skin with which we have anything to do. Age, race, geographical distribution, the epidemic character, yearly or seasonal variation, and lastly and most important, the host or individual himself, constitute factors which may produce a variety of changes in the textbook picture of a disease.

The successful clinician of today, therefore, should be one not only equipped with a proper background and an earnest desire to correlate cutaneous disease phenomena with morbid processes as they occur elsewhere, but he should also infuse into his diagnoses the speculative quality which distinguishes the diagnostician who deals with more occult phases of medicine. Together with this, he should constantly struggle against the tendency to apply rigid criteria to diagnosis, and to develop a flexibility of mind which will not only serve to enrich his understanding of disease in general, but which will build up for him a background of experience so necessary for success in the recognition and treatment of disease.

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*Certain Aspects of Drug Therapy**

THE THERAPEUTIC USE OF CIRCULATORY STIMULANTS

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This subject is such a broad one for a twenty-minute paper that all we can hope to do is to discuss briefly a few of the more common conditions calling for circulatory stimulation, and merely to indicate rather dogmatically the means to be employed. Preliminary to this, however, it may not be amiss to review quickly some of the essential effects on circulation produced by several of the drugs to which reference will be made. Further, from a philosophic standpoint, any agent which, after acting either directly or indirectly, eventuates in a more efficient circulation could be considered a circulatory stimulant.

Thus, a writer in one of our best-known systems of therapeutics says that morphin in certain circumstances is the best cardiac stimulant, because of its production of mental and physical rest. In our presentation, however, we shall adhere more or less closely to the accepted conception of the word "stimulation," not only in the interest of orderly thinking, but also to obviate the necessity of discussing every known therapeutic agent used in circulatory failure; for, obviously, the final effect anticipated from any measure so employed is circulatory improvement. Thus the use of rest, exercise, sedatives, diuretics, etc., however valuable, have no place in a paper under this title.

Digitalis. The essential circulatory benefits derivable from digitalis are concerned with its direct cardiac and vagus actions, more particularly as follows: (1) Increased contractility, with stronger and more prolonged contraction and increased refractory period, allowing of greater diastolic filling. (2) Sinus slowing of rate—mostly a result of central vagus stimulation. (3) Decreased conductivity, especially in the auriculoventricular bundle, mostly due to central vagus action, but partly to direct action on the bundle. (4) In small doses lessened excitability of the myocardium, accounting for its beneficial action in certain cases of extrasystole, but increased myocardial excitability in larger doses, as often seen in the arhythmias of digitalis intoxication.

Nothing in our experience or nothing convincing in the literature would lead us to substitute for digitalis any such drugs as strophanthus, squill, convallaria, cardiazol, scillaren, etc., or any other of the divers preparations (mostly foreign) which are now flooding the market, except ouabain. A good standardized powdered leaf or tincture is sufficient for all practical purposes. The vascular action of digitalis is of little or no therapeutic value.

Ouabain (Arnaud). This drug is one of the forms of crystallized strophanthin, and the only form of strophanthin which is of uniform strength and action, and hence the only form referred to in this paper. While it may be effective orally, it is usually given intramuscularly or intravenously. Ouabain acts qualitatively like digitalis, but, except for its action on myocardial tonus, it would be useless. However, it stimulates the tonus, according to Vaquez, far better than does digitalis, and because of this, is effective at times when digitalis fails, and has fewer of the toxic effects of the latter. It is probably the best emergency heart stimulant when used intravenously, but due to its local irritant action may cause severe sloughing if not administered carefully.

Caffein Series. The drugs of this series (caffein, theobromin, and theophyllin) are circulatory stimulants by reason of: (1) increasing cardiac tone and amplitude of contractions, (2) vasodilatation, which is the resultant between a

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strong local vasodilator and a weaker central vasoconstrictor action. Caffein is the weakest, theophyllin or theocin the strongest, and theobromin intermediate. Their cardiac effects are not nearly so strong nor so lasting as digitalis, and hence are used only as adjuncts to the latter, while their stimulation of the central nervous system is a serious drawback in many cases.

Epinephrin. This causes a rise of blood pressure by reason of its stimulant action on the peripheral end of the sympathetic nervous system, causing vasoconstriction. In the heart it also stimulates these endings, causing an increased rate and increase of myocardial irritability. The latter serves as the basis for its intracardiac use in cardiac arrest during anesthesia, Adams-Stokes syndrome, etc.

Ephedrin. The action here is similar to epinephrin, but is less quantitively and more prolonged. It is effective by mouth.

Quinidin. Strictly speaking this drug is not a cardiac stimulant, but a depressant, but when used in appropriate cases the resulting improved circulation justifies its consideration here. By reason of its depression of myocardial excitability, quinidin is frequently effective in cases of extrasystole, and by lengthening the refractory period it often abolishes the circus movement of auricular fibrillation, causing a restoration of normal rhythm.

Barium Chlorid has been used, as has *thyroid extract,* because of its known stimulation of myocardial irritability in cases in which it might be well to establish an ectopic focus in the ventricles, as in Adams-Stokes disease; but it may cause ventricular tachycardia or other undesirable cardiac effects.

Of the conditions requiring circulatory stimulation we have chosen the following for consideration:

Congestive Heart Failure (Acute and Chronic)

Once this condition is diagnosed, one immediately thinks of digitalis unless one of the well-known contraindications to its use is present, no matter what the cause or particular lesion responsible for the decompensation may be. Some say that unless fibrillation or flutter is present it is of no avail, but we agree with others to the contrary and have pharmacologic data to substantiate us in addition. There is no doubt, however, that the most striking results are seen when either of these arhythmias is present. In the great majority of cases no other circulatory stimulant is needed and only exceptionally would it work if digitalis failed. The exception in mind is ouabain, which, in certain cases of the so-called "irreducible heart failure" of Vaquez, is effective when digitalis has failed. This drug in such cases is best given intravenously in doses of 1/240 grain on two successive days, followed by 1/120 grain daily for two more successive days. When digitalis is now given it is efficient again. As said before, this action of ouabain is attributable to its powerful action on myocardial tone. Another use for ouabain is in the very critical cases where immediate and strong cardiac stimulation is needed to overcome cardiac collapse. Here 1/120 grain is used immediately and repeated every six hours for two or three doses in amounts of 1/240 grain, digitalis being begun in the meantime.

In the average noncritical case there seems to be no good reason for trying to digitalize the patient immediately and to incur unnecessarily the risk of digitalis intoxication, either from individual susceptibility or from previously having taken the drug. Good results are obtained by giving about five grains of powdered leaves daily for a few days and, as improvement is noted, gradually reducing the dose until a maintenance dose of about two grains daily is reached.

In the more severe cases, the modified rapid method of digitalization is advisable. One and a half grams of powdered leaf or 15 c.c. of tincture per 100 pounds body weight is given in divided doses over a period of four days, giving two thirds of the total the first day, one sixth the second day, and the remaining sixth during the third and fourth days. If no untoward symptoms have occurred, a daily maintenance dose of 0.15 gm. is kept up.

Members of the caffein series are usually employed for effects other than circulatory.

Quinidin would be used only in the very mildest cases of auricular fibrillation or flutter which failed to subside under digitalis—never in badly decompensated hearts or in fibrillators who have had embolic phenomena. It is a drug to be used in conditions of disordered heart beat (auricular fibrillation, auricular flutter, certain cases of paroxysmal tachycardia, and premature beats) that have not yet become decompensated, or only slightly so.

Circulatory Disturbances in the Acute Infectious Diseases

Frequently in pneumonia, typhoid fever, and septic conditions we meet with a condition of circulatory failure variously attributed to myocardial weakness or peripheral circulatory failure. The weight of evidence is apparently in favor of the peripheral failure, although this is not settled. One thing may be said rather definitely, however; that is, that digitalis is of little

or no value in these states, except in the presence of auricular fibrillation. At autopsy there is often found evidence of fatty degeneration, cloudy swelling, and other degenerations of the myocardium, but when we consider the reserve power of the heart it is difficult to establish these findings as the cause of the failure, especially in view of the lack of digitalis response. In case of preëxisting cardiac disease, the early use of digitalis, before circulatory failure is evident, is logical. There is no agreement as to just which circulatory stimulants are to be used in this condition, but from experience as well as from a consideration of the pharmacologic actions, we should employ caffein or theocin in addition to ephedrin for the combined cardiac and peripheral actions, and thereby raise the lowered blood pressure. Both may be given every two or three hours for seven or eight doses, two grains of the former to three quarters of a grain of the latter.

In infections with the gas-bacillus group, a type of failure is sometimes seen simulating surgical shock, and demanding the same treatment.

Stokes-Adams Disease

For the period of seizure with its asystole of the ventricles, the intracardiac injection of ten minims of a 1:1,000 epinephrin solution often establishes a ventricular ectopic focus and starts the ventricles to beating. Because of a similar action, barium chlorid and ephedrin have been used successfully to ward off seizures. Massage of the heart through the diaphragm, if this occurs during an abdominal operation, or striking the precordial area, if not, sometimes affords the necessary stimulus.

Circulatory Upsets During Surgical Anesthesia

According to Sollman, death during the induction of anesthesia is cardiac, the usual sequence of events being sudden suspension of respiration from acapnia, the resulting asphyxia leading to cardiac dilatation, vagus stimulation, and final asphyxia of the heart. This is more rapid in chloroform anesthesia than with ether because of the direct cardiac action of the former.

Death during deep anesthesia is due to respiratory paralysis, with more or less involvement of the circulation from paralysis of the vasomotor center, as well as cardiac depression in chloroform anesthesia. The circulatory stimulants indicated in these conditions are: (1) Cardiac massage if the heart has already become arrested; (2) the intracardiac administration of ½ to 1 c.c. of 1:1,000 adrenalin solution; (3) ouabain 1/120 grain intravenously; (4) caffein subcutaneously, given early for its stimulation of the vasomotor center; (5) the introduction of 500 to 1,000 c.c. of saline solution, with 1 c.c. of 1:1,000 adrenalin into the cardiac end of an artery for the peripheral effect.

Syncope

In syncope we have a low blood pressure from central vasomotor depression, and a bradycardia from central vagus stimulation. Usually this needs no medication, but where unduly prolonged the simultaneous hypodermic use of 1/75 grain of atropin and 1 c.c. of 1:1,000 adrenalin meets the indications.

Surgical Shock

The work of Cannon, and of Dale and Richards, and others, when correlated, makes it appear likely that surgical shock as encountered after severe trauma, handling of viscera during operations, etc., is similar to histamin shock, i. e., toxic in origin. The toxin affects the endothelial lining of the capillaries and venules of both splanchnic and extrasplanchnic regions, resulting first in dilatation of these vessels and then in loss of their permeability. As a result, there is stagnation of blood in these capillaries and venules, and later a concentration of blood here by loss of fluid into the tissues. Coincident with this there is compensatory constriction of arterioles to maintain the blood pressure, but a little later the pressure falls, due to improper return of blood to the heart. The heart is affected only in the later stages, due to anoxemia. The vasomotor center and sympathetic nervous systems are in a state of stimulation. The final basis for the syndrome is a reduction in the circulating or effective blood volume for the reasons stated above. In a state of affairs such as this the only logical circulatory stimulation can come from re-establishing the circulating blood volume, which can be accomplished by the transfusion of whole blood or the administration of 25-per-cent gum-acacia solution in 20-per-cent glucose at the rate of 5 c.c. per kg. per hour. In the later stages ouabain may be added for the heart.

We have omitted consideration of several drugs such as alcohol, camphor, strychnin, etc., because of their feeble stimulating power on the circulation when critically studied, although they may be useful otherwise.

Conclusion

The choice of a circulatory stimulant should be governed not only by the name of the condition to be attacked, but more particularly by a

knowledge of its pathologic physiology and the pharmacology of the appropriate drugs.

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THE THERAPEUTIC USE OF HABIT-FORMING DRUGS*

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The subject matter of this paper is an attempt to point out certain facts obtained from the study of a large number of cases of drug addiction in the Philadelphia General Hospital applicable to the therapeutic use of such drugs. These findings are given in the hope that they will aid the physician when the advisability of administering such drugs is to be considered, in the view of the possibility of creating addiction.

The average addict, when first interviewed, will always attribute his addiction to a physician. Frequently, if his confidence be obtained, he will give his true story of addiction, and in most cases admit that it was due to association with other addicts. A careful survey of 3,165 cases of addiction in males, made by my assistant, Dr. Edward Torrance, showed only 8 per cent due to the medical profession. A similar study of 1,540 females showed 15 per cent. Of the total number of addicts, only 1.5 per cent of the males and 0.8 per cent of the females were over the age of 45 years. Only three of the men were over 55 years of age and not a single woman. This very low percentage in people over 55 years of age we believe significant, as we shall point out later on. It is, therefore, gratifying to know that the number of cases of addiction due to practicing physicians is not so great as generally believed, and is due to their knowledge of the great dangers of creating addiction.

A study of the original complaints of the patients who insisted upon medical addiction resulted in the following chief complaints: neuritis, asthma, cough, gas poisoning, and accidents in the males, and neuritis, asthma, gall-bladder colic, and menstrual disturbances in women. Quite a few cases not listed under the head of medical addiction were due to druggists who, on their own initiative, prescribed morphin or veronal for chronic alcoholism.

It is significant that we did not encounter a single case of heart disease or tuberculosis in the entire group. In all these cases of medical addiction, when a drug was administered to prevent the suffering of withdrawal symptoms, there was no evidence of the original subjective symptoms, even though they were first noticed years before.

On the other hand, the objective signs of asthma, chronic cough, or lung irritation from gas poisoning were never seen. This convinced us that quite a few more of our addicts were not telling the truth as to the original cause of their addiction, and that the incidence of medical addiction was even lower than our figures show. These addicts were unwilling to endure the suffering of drug withdrawal, and feigned the above subjective symptoms to obtain the drug again.

Patients who have become addicted to one of the habit-forming drugs differ widely in their physical appearance and general behavior. It is always necessary to specify the type of drug to which a patient is addicted when a discussion of drug addiction takes place. These people very rarely shift from one group of drugs to another. For our purposes in this paper, only four different groups exist. The first and most important are those addicted to opium and its derivatives, such as eating opium, smoking opium, paregoric, laudanum, morphin, and heroin. The decided preference of this group is either morphin or heroin used hypodermatically. The average addict to this group, if he be acquainted with the method, also prefers to smoke opium, but the length of time consumed in deriving its effects precludes its use from an economic point of view. They are always pressed for funds and scarcely have time to indulge, even if crude opium be available. Addicts in this group never use alcohol when drugs are available.

The second group of addicts to be distinguished are those addicted to cocain. They either sniff it or use it hypodermatically. Opium addicts, if using morphin, may occasionally use cocain to obtain results similar to heroin, but as a general rule the cocain addict is in a group by himself. The third group consists of people who are addicted to the hypnotics; namely, chloral, veronal, luminal, and similar drugs. This group quite frequently use alcohol, shifting from one to the other, even turning to cocain and occasionally opium and its derivatives.

The fourth group are those individuals addicted to hashish or Cannabis indica.

The reason for pointing out the necessity of separating these groups will be seen from a description of their general behavior, both during the influence of the drug and when the drug is withdrawn. These descriptions are also given in order that a clearer picture may be in the mind of the physician when the possibility of addiction is present.

Patients addicted to opium and its derivatives are practically impossible to detect by their gen-

*From the Narcotic Wards of the Philadelphia General Hospital.

eral behavior and appearance. The desire for the drug and the tremendous difficulty encountered in obtaining it has made them far more clever than other groups of addicts. Extensive clinicophysiologic studies of this group showed no impairment of any organic functions. If well supplied with drug, they will, as Bishop[1] has pointed out, escape detection for years. Their tolerance for the drug is amazing, some addicts using as much as sixty grains daily. In one experiment we were able to introduce intravenously thirty grains of morphin sulphate in two hours and twenty minutes, with no physiologic effects.[2] If the drug be suddenly withdrawn, they will evidence the same symptoms, appearing in order as follows: yawning, restlessness, lacrimation, sneezing, hot flashes, cold chills, marked pilomotor activity, perspiration, loss of appetite, vomiting, diarrhea, insomnia, muscular tremors, and twitches, and a marked change in disposition, begging or threatening those about them who are in a position to supply them with drugs. These symptoms last for about three days, then gradually subside, and within a period of five to ten days the patient is again practically well.

During this period he has lost his tolerance and can now derive the same satisfaction of his craving with a quarter grain of morphin. Occasionally addicts are unaware of this reduction in tolerance, and if a larger dose be taken, symptoms of acute morphin poisoning manifest themselves and, occasionally, death.

Facts of importance to the practitioner so far as the opium addict is concerned are as follows: One hypodermic and never more than two of a single dose of morphin is all that is necessary to re-addict these people following treatment. It is a favorite trick on their part to present themselves to a strange physician and feign a violent pain in order to obtain the single dose. As a rule they will seek out the busiest practitioner in the community on the basis that he is so rushed he will not take time to make a thorough examination on his first visit but be content to administer morphin and await results. Too much faith also should not be placed in the patient's complaints of former pains if the history of addiction be known. Under no circumstances should a hypodermic of morphin be given to the stranger who appears stricken with severe pain unless the physician has satisfied himself as to its absolute necessity and that the stranger is not feigning his illness.

The opium addict rarely if ever resorts to alcohol, except after he has taken the cure, but here, too, the alcohol acts exactly like morphin or heroin itself. The instant he ceases drinking alcohol the withdrawal symptoms again appear. Tonics strong in their alcoholic content should not be given in these cases.

Persons addicted to cocain belong in a distinct and separate group. They are far less clever than the opium addict. If deprived of the drug, they do not become ill as do those addicted to opium and its derivatives. Under the influence of the drug they are restless, excitable, exhilarated, and frequently suffer with hallucinations. The craving is often severe and the effects of the drug far more degenerating than those of morphin. Its indulgence on their part is frequently more sporadic than with the opium addict, who needs a continual supply for comfort. We shall attempt to point out later the type of persons who may become cocain addicts.

The third most common group of addicts in this country are those addicted to the general group of hypnotics; namely, chloral, veronal, and luminal. From the standpoint of moral degeneration and ill effects we believe this class to be the worst. Withdrawal of the drug does not cause any ill effects, but there remains the ever-present desire for the drug, a desire to remain in a comatose condition. They wish to relax and sleep the rest of their lives, caring little about their appearance, their families, or their environment. This group of addicts rarely, if ever, present themselves to the physician for treatment on their own volition. They are, however, a constant source of worry to the family, who in turn appeal to the family physician for aid. They frequently become victims of overdosage, the diagnosis of the condition being based on the stupor and slurred speech.

It is essential, therefore, that the physician have in mind a clear picture of the results of addiction when he is faced with the problem of prescribing habit-forming drugs.

We were unable to find a single case of addiction that took place when only one dose of morphin had been given. Our findings indicate that the length of time morphin is taken before addiction is created varies considerably. It depends entirely upon the frequency of administration. We have obtained histories of addiction taking place within a week of its original use and again only after a period of six weeks to two months. It is our belief that the daily administration of morphin over a period of one week in certain types of people is short enough to create a craving for the drug. On the other hand, it requires but a single dose to start the picture of addiction in all its fullness in a patient who has had a history of addiction. We wish again to emphasize the point of never administering a habit-forming drug to the stranger suf-

fering with violent pain, unless the cause be an obvious organic one, and the telltale signs of hypodermic points or of previous abscesses be absent on the skin. There seems to be a prevailing opinion that the opium addict can be detected by means of the constricted pupil. It is true that nearly all opium addicts under the influence of the drug have constricted pupils. This physical sign, however, is coincident with comfort, and during comfort the addict will avoid contact with the physician. On the other hand, during the suffering of the withdrawal symptoms, his pupils are dilated, which is an aid to the physician in the detection of narcotic craving. The only other physical signs frequently aiding the physician in the diagnosis of drug addiction or of its having existed are the presence of hypodermic injection points or scars of previous abscesses on the skin.

Combined clinical, psychiatric, and psychologic studies made with the idea in view of being able to establish easily understood types of individuals who would be susceptible to early addiction were none too satisfactory. We are convinced that practically every one might eventually become addicted to the use of opium and its derivatives. A similar view was also adopted toward cocain. As for the veronal group, only where there is a marked history of alcoholism or melancholia is the danger great.

The conclusion reached, however, was that the general practitioner, to whom fortunately the task of prescribing these drugs falls most frequently, is best fitted for this problem. He not only knows the patient's ills, but, far more important, the environment in which they are encountered, which so frequently exaggerates or minimizes the prevailing symptoms. He knows that a patient living in an environment of apprehension, fear, dissatisfaction, or failure has his or her pain aggravated and sleep is frequently impossible. On the other hand, success, content, and exhilaration do much to minimize pain and produce sleep. Frequent statements by addicts as to their feelings while under the influence of opium and its derivatives show very clearly the reasons for addiction. The addict to opium and its derivatives expresses his feelings as follows: "It is the best medicine God ever made." "You feel as if you were sitting on top of the world." "It makes you forget all your worries." We wish to point out in a general way, then, to avoid the use of morphin or other opium derivatives in patients whose symptoms are present in an environment of apprehension, fear, worry, depression, and failure, because the drug not only relieves the pain but also temporarily sets aside the aforementioned disagreeable feelings.

The cocain addict expresses his feelings as those of renewed vigor and a confident feeling of meeting his or her task with amazing mental and physical ability. Patients who are always complaining of being tired and run down, who are leading a life of drudgery, should never have cocain prescribed. When its effects disappear they sink lower and lower and are too weak and ambitionless to attend to the simplest and easiest duties of life.

A general statement as to when it is safe to use the hypnotic drugs, such as chloral, veronal, etc., is more difficult. Patients who cannot sleep and whose morale has become weakened to such an extent that they have lost their desire to continue to strive soon become addicts. This is particularly true of patients with a melancholic taint. Another susceptible type is the alcoholic who wishes to straighten himself out, as he expresses it. These patients are quite tolerant to veronal and luminal, and its accessibility at the drug store makes the possibility of addiction a great deal easier.

Discussing the use of these drugs still further from a general point of view, we believe it essential that the so-called evils of addiction be further analyzed in so far as the fear of addiction is considered. We believe it almost as important that there are times when fear of creating addiction results in the withholding of the drug when comfort might be given.

We were unable to detect any physical or organic changes brought about by the continued use of morphin. One of our patients was sixty-three years old, addicted for a period of forty years, and still enjoying excellent health. The tremendous moral degeneration that takes place we believe is primarily due to the craving which is powerful enough to make the addict stop at nothing to obtain his supply. It forces him to associate with other addicts who scheme to maintain their supply. He is a fugitive from law with its added source of fear. He is shunned by the public and practically ostracized for life. This attitude on the part of the public adds tremendously to his difficulties.

These factors we consider of vital importance in the right direction for the prevention of addiction. But this very fear has resulted in the frequent withholding of the drug in the aged, and in many cases where the term of life for the patient remains short. The medical profession generally does not hesitate in the slightest to use morphin in cases of malignancy. The relatives and friends expect this procedure and do not express concern over the use of what is popularly known as "dope." On the other hand, we have encountered quite frequently the aged,

whose lives have ceased to be useful and who are not only miserable themselves but making all those surrounding them miserable, suffering pain and insomnia which could be easily relieved by morphin or veronal, making them peaceful and content. Even if addiction took place, they would be a great deal more content and happy, and that would be better than to allow them to remain miserable and suffering the rest of their lives. It is extremely important, however, that the attending physician should see to it that their supply be maintained, as this will prevent one of the principal causes of moral degeneration; namely, the association with other addicts who obtain their supply through illegal channels and by illegal methods.

We have encountered several cases of advanced cardiac disease with the well-known symptoms of suffocation in the upper part of the chest and including anginal pains where physicians have refused to prescribe even veronal for fear of causing addiction. It is our belief that in the aged the fear of causing addiction should be considered least important and the patient's welfare and relief the prime consideration. On the other hand, we cannot emphasize too strongly that in cases where a patient's life is still quite active and the complaint one that may subside, the fear of creating addiction should be uppermost in the mind of the physician regardless of the age, and the drug should be prescribed only when absolutely necessary.

We cannot find any reason for the use of cocain in the young. As for veronal and luminal, again the same general principle holds good: namely, that we should secure comfort first and the possibility of addiction should be secondary in the aged.

Turning more to the specific uses of these narcotic drugs, we find opium and its derivatives used for pain, insomnia, fear, disturbances of respirations, diarrhea, and convulsions.

Pain and insomnia can be considered more or less together. These two symptoms, above all, require the most exact study on the part of the physician as to their cause. The cases of medical addiction which we encountered were all due to pain of neuritis, menstrual pain, gall-bladder colic, and former supposed injuries, particularly to the spine. If the pain be definitely due to organic disease and severe enough to demand the administration of morphin, one should not hesitate to administer the first dose provided the history of previous addiction be absent. At the same time, however, the physician must have in mind the possibility of a recurring attack, and take steps immediately for the correction of the operating cause, as well as keeping in mind the ability of the patient to stand pain, as governed by his environment and mode of living.

Of all the complaints that must put the physician on his guard, neuritis and menstrual pains are the most important. If the pain be organic in nature and not amenable to medical or surgical treatment, the incidence of age and nature of the cause should govern the procedure. If the cause be one in which the ultimate end can be only death, as in cancer, one should not hesitate to proceed with morphin. Yet, the amounts in pain should be carefully watched for the following reasons: As tolerance develops, the analgesic action of morphin tends to disappear. One of our addicts, receiving sixty grains of morphin a day, developed an abscessed tooth and requested a tablet of aspirin for his pain. Another, using thirty grains a day, developed a severe infection of the mouth which he professed was exceedingly painful. Schmidt and Livingstone[3] have shown that tolerance develops more slowly in dogs when the amounts given are small than when the amounts given are rapidly increased. In cases of cancer it is very likely that the pain has not increased as much as the physician believes, but rather that the morphin has ceased to exert its analgesic effects.

In cases of insomnia morphin should never be administered to the young or to any one who does not have any organic disease. On the other hand, in the aged, where veronal and luminal and the other hypnotics have failed, we believe its usefulness to be of value even in the face of addiction.

Practically the only time that the medical profession is justified in the use of morphin in cases of fear is prior to operation, together with its effects of producing muscular relaxation. Following operation the attending shock and fear of convalescence also necessitates the use of morphin. Its use, however, should be immediately discontinued when the evidence of shock has disappeared. The cost of the operation, time lost, and fear of its results add to the worries of the patient, which are easily removed by the drug. This is generally true of women more than of men, particularly in many pelvic operations which are so intimately bound up in their sex life. It would be well for the surgeon always to consult the family physician in all cases concerning the use of morphin for an extended period following an operation.

Extreme fear and worry brought about in an environment that may persist for some time to come should never be treated by opium or its derivatives, nor by luminal or veronal. Nothing more potent than bromid should be resorted to.

Considering the disturbances of respiration for

which morphin is considered of value, they are limited practically to the orthopnea of heart disease and asthma. Diseases of the circulatory apparatus that are sufficiently grave to cause dyspnea while resting in bed and not responding to digitalis, in themselves are indicative of grave disorder of the cardiac muscle and a rather limited time for the patient to live. In such cases there should not be any hesitancy on the part of the physician to prescribe and administer morphin even if addiction be produced. It is again his duty to see to it that the patient be constantly supplied should addiction take place.

On the other hand, asthma should never be treated with morphin in the young. If called to see an acute attack, adrenalin should be used and the necessary steps taken to determine any sensitization. If this exists it should be remedied, and if there is no specific cause, only adrenalin should be used. On the other hand, in the aged, if adrenalin does not produce its effects or the circulatory system does not permit its use, there should be no hesitancy on the part of the physician to resort to morphin, and to supply the patient's needs cheerfully if addiction takes place. Morphin should never be used for cough in tuberculosis, as codein acts just as well and addiction to codein is practically unheard of. If, however, the patient's life be in danger, one should not hesitate to use it.

Occasional attacks of diarrhea do not forbid the use of paregoric, the usual form of opium prescribed. If such attacks continue, however, in the young, with a condition that cannot be remedied, its use should be stopped.

Before prescribing morphin in any event, the physician should always ask himself the following questions: To what extent does the patient's environment and mental make-up aggravate or minimize the amount of the pain he or she feels? Is the pain organic or functional? How soon will it occur again? Can it be remedied by medical or surgical treatment? Has the patient's life ceased to be useful?

The development of adequate substitutes for cocain has abolished largely the possibility of cocain addiction through the medical profession. There are no general subjective symptoms of which we know where its use is justified. Occasionally it may be used for gastric irritation and vomiting in acute cases. Locally its only value is located in the nose, and without exception the most dangerous place for its use, in view of creating addiction. Patients become addicted to cocain very quickly, and its continued use in the nose is practically always followed by disastrous results. Dock[4] has recently brought attention again to Sluder's work[5] on the treatment of the nasal ganglion syndrome with almost pure cocain solution applied locally. The multitude of symptoms for which relief may be obtained is strongly suggestive of many of these cases being neurotic in origin. We believe that this method of treatment is extremely dangerous from the standpoint of creating addiction, and should be used only in the aged.

Earlier in this paper we have pointed out the return of subjective symptoms in opium addicts when the drug is withdrawn. This is also true of the few cocain addicts we have encountered who have had neuralgic pains. Evidence that these pains are purely hysterical is borne out by a recent observation in a young man who, while playing football, suffered a fracture of the middle finger of his right hand. The fracture was accompanied by a good deal of pain for several days. His convalescence and recovery were excellent, and he reëngaged in the game a month later. The following season he was struck in the chest, suffering a dislocation of the second right costal cartilage. To his own surprise, the finger which had been injured a year before again felt as painful as when he had first injured it. We bring this point out for the purpose of again cautioning the medical profession regarding the use of any of the habit-forming drugs for recurring pains which are functional in nature.

The therapeutic use of sedatives of the veronal group is largely associated with insomnia and nervousness. Here again the physician's knowledge of his patient's environment is of extreme importance. Addiction to these hypnotics is not nearly so dangerous as to those of the opium group, but if it does happen, it produces more profound changes, particularly in the aged. These people wish to sleep the rest of their lives. These sedatives should be prescribed for the alcoholic only with the greatest care.

We wish again to emphasize the point that the general practitioner is best fitted for the task of prescribing drugs that may be habit-forming in nature. We do not believe that the fear of creating addiction should deter him when prescribing their use in the incurable and aged. On the other hand, we cannot emphasize too strongly the avoidance of these drugs in patients in whom the diagnosis is obscure, particularly in the young and in neurotic individuals.

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ABSTRACT OF DISCUSSION

Of Symposium on Certain Aspects of Drug Therapy

J. I. JOHNSTON, M.D. (Pittsburgh, Pa.): In discussing the paper of Drs. Donovan and Davis, I wish to refer to a means they have mentioned but did not stress greatly, if they will allow me to use the term "circulatory support" instead of "circulatory stimulant." We use a great deal of dextrose intravenously, and think it meets definite indications—not with the idea that was emphasized some years ago; namely, to protect bodily protein, but to act along physiologic supportive lines. The use of dextrose solution in various strengths and in small amounts, frequently given, seems to act beneficially best in two conditions—pneumonia and cardiac emergency. In the former the problem is not alone circulatory support, although that does enter into every case. Where such circulatory level is at fault, as in late pneumonia, we believe that 200 to 300 c.c. of a 25-per-cent solution of dextrose gives both circulatory support and augments whatever other medication is employed.

I digitalize all my pneumonia patients and I make this statement without apology. I feel that when further circulatory support is needed, the intravenous method of using dextrose, repeated three or four times a day, helps to bridge over this deficiency. Again, in meeting failure of the circulation, postoperatively or during anesthesia, there also seems to be in the use of this physiologic remedy augmentation of action of whatever remedies are being used, and clinically a better result is immediately and remotely apparent. While no satisfactory explanation has been given for this action up to the present, we believe it is a definite and useful line of therapy.

Medicine is progressing along the line of physiology, and the interest taken in this subject and its adaptation is noticeable along all clinical lines of practice. I believe that this is the line in which the greatest progress of therapy is to be made in the future.

THEODORE DILLER, M.D. (Pittsburgh, Pa.): A man came to me thirty years ago with tabes dorsalis. He was seen at intervals for a couple of years and then disappeared, but he returned two months ago, after almost thirty years' absence. His symptoms are practically the same as when he was first seen. This case seems to be rather unusual and worth reporting as a case of nonprogressive tabes. A feature of this case is the fact that this patient for four or five years took morphin regularly to relieve his tabetic pains and was a morphin habitue. He told me further that he had gotten over this habit himself and was now entirely free from it for several years and said he would rather die than continue that way.

My recollection is that several cases of the morphin habit have been self-cured, but I have seen very few morphin addicts who told the truth. I believe it was de Quincey who reported that he cured himself of the habit.

In this connection I should like to relate the case of a physician who many years ago became a cocain addict. He had some sexual disorders and would inject cocain into his perineum. This resulted in sexual energy which he did not have otherwise, and he indulged himself very freely. After three or four years' struggle with this he was advised to leave the medical profession and get into something new. He took this advice and eventually became connected with a large bank in the West. For many years he has led a useful life and has never returned to the cocain habit.

DR. CHARLES C. WOLFERTH (Philadelphia, Pa.): Dr. Light has carried out clinical studies on habit-forming drugs far beyond what has been done previously. I think he should be recognized as the leading authority in this field.

We frequently have to use morphin in the treatment of patients with cardiac decompensation. So far as I know, I have never produced serious drug addiction in such a case, although one always has to consider that possibility. There are many cardiac cases in which morphin is the most valuable drug, more valuable even than digitalis. It is the general impression, I think, among clinicians that the subjects of cardiac failure are less liable to morphin addiction than the victims of other forms of illness in which this drug is used. Perhaps Dr. Light can tell us whether this impression has any foundation in fact.

With regard to the paper of Drs. Donovan and Davis, I wish to add a few words about digitalis. In order to obtain the best results in restoring compensation, the drug must be given according to well-defined principles. It is most important to remember that digitalis has two distinct and separate uses in cardiac diseases. The method of employment in the treatment of arhythmias is entirely different from that of attempting to stimulate the heart muscle. When used for auricular fibrillation, the dosage is determined solely with the view of controlling the cardiac rate. This may be a very small dose or it may be necessary to approach the toxic range. Some patients may need only ten or fifteen grains, while others may require twenty-five, thirty, or more. After the optimum cardiac rate has been obtained, the dosage should be sufficient to maintain the optimum rate. This may be either a small or large daily ration of digitalis. If you give too much or too little you handicap the heart mechanically, in the one case by having too slow and in the other case too rapid a rate. If we bear this one principle in mind, the use of digitalis in auricular fibrillation is very simple, and can be carried out by any physician.

When, however, the rhythm is normal and the drug is given to strengthen the heart beat, it is more difficult to estimate the proper dosage. The usual mistake is failure to push the drug to the physiologic dosage. One should not be afraid to produce some of the mild toxic effects of digitalis, provided the patient is under close observation. At most it means a day or two of vomiting. If one is afraid to push the drug, he often fails to get the therapeutic effects which often can be obtained by full dosage. The subject is rendered somewhat complex by differences in tolerance and our lack of certain knowledge regarding excretion or destruction of the drug.

DR. DAVIS (in closing): It was impossible to cover the subject in a twenty-minute paper, but we did the best we could.

DR. LIGHT (in closing): As to the number of addicts who were cured, I think we were able to follow close to a thousand and we had but one cure. All of them returned to the use of the drug again except one man, and I am not sure that he is not again addicted.

No matter what derivative of opium is used, one can easily be substituted for the other, except codein. I am acquainted with one codein addict who could use morphin almost as well as codein, this being the only instance.

We studied many patients with cardiac defects, and could not detect a single thing that morphin did in the way of improvement outside of the respiration. If the patient had a rapid pulse and arhythmia and was given morphin, there were just as many arhythmias, the pulse remained just as rapid, and his blood pressure was unchanged, but with the slowing of respiration he became decidedly more comfortable.

What I have to say about the use of drugs in the aged is quite radical, but I have started out with one premise and that is that there is no evidence of physical harm. I do not wish this to be confused with moral deterioration, but when this condition does take place it is due to the patient's association with other addicts who hesitate at nothing to get the drug. I happen to know at least half a dozen old persons who for years have been addicted to the use of paregoric and laudanum which had been prescribed by their physicians. They have always been allowed to use it and are as much respected in their community as ever.

The attitude of the public today is the correct one and should be maintained. Morphin should never be administered when in doubt, but in the aged the general practitioner should not be worried if his patient becomes an addict before he dies.

*Symposium On the Surgical Patient**

THE SURGICAL MANAGEMENT OF ACUTE TRAUMATIC MAJOR CASES

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Traumatic major surgery has come to occupy one of the most important positions in the medical profession.

The appalling number of industrial disabilities and fatalities, which in this State alone numbered 160,743 in 1927, has aroused an economic problem of great importance in the mind of the employer and a more thoughtful viewpoint in the mind of the surgeon as to his duty to his patient.

It is a strange commentary that only within recent years the skilled employee, by whose intelligence and physical equipment the finest technical and mechanical efficiency in the world's history has been reached, has unconsciously been permitted to continue his constant mental and physical labors without much thought for protection, preservation, and reconstruction.

Considerable progress has been made in the prevention of accidents, but there remain many problems yet to be accomplished in the way of education of employees, industrial coöperation, better hospital facilities for physical and electrotherapy, and a closer study on the part of the surgeon to prevent loss of life and to restore function as soon as possible.

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The field of major traumatic surgery is broad, and the management of such cases undoubtedly comes within the province of the general surgeon whose experience has equipped him with the technical skill and the principles of sound surgical judgment so necessary in the care of such cases.

The real purpose of this discussion is to consider the preoperative, operative, and postoperative phases of major traumatic surgery as they appear at the hospital for treatment. This affords considerable latitude, and the necessary brevity of my discussion precludes anything other than the more essential details of this work.

We consider all such cases as major emergencies, requiring the immediate attention of the surgeon in charge. It has been our experience that the initial treatment at the time of admission is a most important factor in this work and as a rule determines success or failure.

With this as a guiding principle, we meet our patient upon arrival, taking note first of the manner of transportation and the extent and method of first aid which we consider highly important, as it imparts certain information relative to shock and hemorrhage.

We then proceed with an immediate investigation of the patient's general condition, including chiefly the presence or absence of shock, which we consider of primary importance in the early hours of major trauma. An experienced surgeon with a keen sense of observation will obtain valuable information relative to the patient's condition as he reclines on the carriage, while a quiet investigation is made concerning the history of injury, blood pressure, temperature, pulse rate, and respirations. If our examination reveals a blood pressure below 90 systolic with a low or absent diastolic, he is immediately transported to bed as carefully as possible, without removing the undergarments, so as to avoid further trauma. Treatment for shock is then established, the character of which will be described later.

Should we find the first-aid dressing secure, it is left undisturbed until the patient has sufficiently recovered from his shock. The only exception to the latter is persistent and dangerous hemorrhage, whereupon temporary methods of control are applied until a safer period.

A complete entrance note is then inscribed upon the chart with a complete list of intelligent instructions, including blood-pressure readings every fifteen minutes. When the pressure has become reëstablished at 100 or over, we investigate more carefully the local injuries and then decide whether to operate immediately or insti-

tute treatment such as would apply to injuries uncomplicated by shock or hemorrhage.

Injuries uncomplicated by shock we approach with the same interest as the foregoing type. If our judgment indicates immediate surgical repair it is performed without delay.

In simple uncomplicated fractures an x-ray is taken immediately, and a safe attempt is made at reduction under morphin sulphate or light nitrous-oxid-oxygen anesthesia.

If the fracture involves the tibia or fibula, it is thoroughly and carefully cleansed with liquid soap and 90-per-cent alcohol, then carefully shaved and five-per-cent iodin is applied. This serves as a preliminary operative preparation. Attempt at reduction is then made under sterile precautions, followed by the application of lateral plaster splints. An x-ray then determines whether or not open reduction is indicated. The same technic applies to simple fractures of the forearm.

If the simple fracture involves the femur or humerus, an x-ray is immediately taken and an extension apparatus applied. A Thomas splint is used for the femur and a lateral-traction appliance for the humerus. After a thorough traction period of forty-eight hours, another x-ray is taken, and if malposition is present the patient is assigned for operation.

Great care should be exercised in the handling of such fractures, owing to the danger of fat embolism which, when developing, is frequently fatal. One such case occurred among our series which showed at autopsy not only diffuse pulmonary invasion but also cerebral involvement, including the medulla.

For major injuries involving the soft tissues, such as extensive lacerations and compound fractures, attention is directed to the prevention of infection in addition to disfigurement and loss of function.

The same general consideration is given this type as the former, and a careful preliminary investigation of the wound is made under aseptic precautions without further contamination. Should the case prove to be a compound fracture with displacement and marked destruction of soft parts, we operate immediately. By following this principle and keeping in mind the short incubation period of pyogenic organisms, particularly the gas bacillus, we have prevented many infections and have saved many lives. We carefully protect the wound by sterile gauze, then cleanse and shave the surrounding skin, followed by an application of two-per-cent iodin. The wound is later given attention at the operating table.

Tetanus antitoxin is administered in all punctured wounds, but only rarely and when deemed indicated in open wounds. In only one case have we found its development in open wounds. This was a very mild attack occurring eight weeks after injury, with recovery.

Fractures of the pelvis showing a rupture of the urethra or bladder are also operated upon immediately, thereby preventing infection and the serious effects of extravasation of urine. Strict aseptic precautions are taken upon catheterization for preliminary investigation of the urethra.

All major traumas not immediately assigned for operation are thoroughly studied in the following manner: a complete medical history and physical examination, third-hour temperature, pulse and respirations for three days, daily urine for three days, renal-function test, and routine Wassermann. Other investigations are made as indicated.

Our experience in the care of many major traumatic cases has impressed us with the importance of making the patient safe for the operation.

The craft of surgery has made a wonderful advance in operative technic in the past twenty years. However, surgery pertaining to trauma and open wounds still welcomes a refinement of technic and a wiser application of many of the recent methods perfected. It also requires more than a mere knowledge of mechanics, as its field embraces all the principles of medicine and surgery.

Experience has taught us to consider each patient with traumatic injury as an individual, instituting operative measures whenever essential to secure the best possible functional result without delay.

The reduction of our mortality rate has been consistent with the improvement in our operating technic and the immediate postoperative care. With each individual case we endeavor to outline our operative procedure in order that it may be conducted in an orderly fashion so as to prevent further trauma and hemorrhage and reduce shock to a minimum, yet reconstruct and restore the injured parts as thoroughly as possible. In the dispatch of such duties, nothing is so important as an efficient, well-trained group of assistants, including the anesthetist.

As a rule we prepare the local operative field before starting the anesthetic. We look upon it always as a possible source of infection, avoiding at all times recent skin abrasions. Five applications each of liquid soap and alcohol, followed by five-per-cent tincture of iodin, with an additional application of iodin before making the incision, have provided our best results.

With the exception of traumatic abdominal work, we use an orthopedic table for our major fracture operations. The parts can thus be properly exposed, controlled, and prepared. It also permits safe graduated traction, which reduces trauma during the operative period.

For the past seven years we have used nitrous oxid-oxygen, which we consider a valuable anesthetic in the hands of an expert, but dangerous when administered by an amateur. The choice of an anesthetist is as important as the type of anesthesia. It has been said that anesthetists are born and not reared. This may be interpreted that some are more adaptable to the import of their duties, which require composure and intelligence, and recognize the surgeon as the responsible head of the operation. Our present anesthetist has administered over 6,500 nitrous-oxid anesthetics on our service without a mortality. The majority of our major traumas receive complete nitrous-oxid-oxygen anesthesia throughout the entire operation, followed by deep inhalations of five-per-cent carbon dioxid or aromatic spirits of ammonia.

Blood-pressure observations are taken before and during the preliminary stages and throughout the entire procedure, the readings of which are our best indications of approaching shock. In fractures of the long bones such as the femur, each act producing trauma—traction, curetting of the bone ends, or drilling of screw holes—is immediately followed by a drop in pressure. The danger signs of shock appear upon the pressure records long before any physical evidence of shock is present. This permits us to suspend the operation and consign our patient to bed before a moribund condition is reached. By this method only one actual operative mortality is recorded among our last seventy-eight cases of open reduction of fractured femurs. We have endeavored to simplify and minimize our operative instruments, selecting certain special ones for each individual case.

Compound wounds such as are found in serious compound fractures, we believe, should be treated by immediate operation. Although the surrounding area of the wound has received preliminary attention at the emergency room, it is again prepared immediately before the anesthetic is started. When anesthesia is established, attention is then directed to the wound, and we follow an established method of safe excision of necrotic tissue in which the pioneer in our community was Dr. R. W. Stewart. This practice was reëstablished during the war, and is better known today as débridement. After fixation of the fracture, all bleeding points are thoroughly secured, rubber-tube drainage is inserted into the various cavities, and Dakin's tubes are applied in case we find it necessary. The wound is left open and sterile gauze is loosely applied. The limb is immobilized by lateral plaster splints, and the patient is consigned to bed.

In the treatment of these wounds, if the Dakin method is used, it is started immediately and continued until the wound is healed and union is established. If we elect to use our old conservative method, the wound remains untreated until the temperature subsides and a local defense is established. The wound is then dressed daily. This method requires less attention and manipulation. Both methods give equal results.

We believe that the operating-room behavior plays an important rôle in the success or failure in traumatic surgery. At the table the surgeon should execute his duties without delay, reduce tissue trauma with the aid of sharp scalpels, avoid unnecessary traction, and above all be mindful of possible sources of infection. Three sources of infection which stand out prominently are: first, traumatized and poorly prepared fields of operation; second, the unprotected nasal and oral cavities of the operating team and all individuals entering the operating room, including nurses who prepare the instruments in the sterilizing room; third, contamination of the wound by the torn glove.

The immediate postoperative treatment of traumatic injuries is very important. Sufficient rest and abundance of fluid are very essential. We have found that morphin sulphate given in graded doses every fifth hour for three doses postoperatively provides the best mental and physical rest. Atropin sulphate given five or six hours after operation is well suited for the majority of traumatic cases in preventing bronchial moisture. Its administration in heavy doses associated with carbon dioxid and oxygen will frequently prevent fatal results from a suddenly developing pulmonary edema. The early administration of fluids postoperatively is highly important. Except in abdominal cases following nitrous-oxid-oxygen anesthesia, fluid in graded quantities given by mouth is tolerated at an early hour. For subcutaneous injection we administer almost routinely 1,000 c.c. of five-per-cent dextrose in sterile water or in normal saline solution. This solution, which supplies needed food calories as well as fluid, is gradually absorbed and if given slowly and in the proper location causes little discomfort and only slight local effect.

Shock, whether it be post-traumatic or postoperative, and regardless of its causative factor, calls for the same underlying principles of treatment, except for certain conditions such as hem-

orrhage, embolism, and toxemia. The plan of treatment briefly is as follows:

Absolute rest both physical and mental, best obtained by heavy initial doses of morphin sulphate.

Elevation of the foot of the bed at least thirty inches, so as to reverse the gravity and assist in directing the circulation from the splanchnic region to the chest and cerebral centers.

At least seven hot-water bottles or other means of sufficient heat to stimulate peripheral circulation.

Sufficient blankets for warmth and the maintenance of a dry skin.

Administration of abundance of oxygen or carbon dioxid, a central respiratory stimulant for reventilation. This induces deep inspiratory movements which activate the diaphragm, and assists the circulation of the blood from the splanchnic vessels to the chest and brain by a suction-pump action.

Adrenalin is of value as a cardiac stimulant in emergencies. We have found that digitalis, caffein, and other cardiac stimulants have no particular value in the treatment of shock.

Blood-pressure observations taken every fifteen minutes, we find, are the most reliable index as to the degree of shock.

Shock associated with severe hemorrhage has no better friend than transfusion, the results of which are at times almost miraculous and to which we resort without hesitation.

Shock associated with toxemia is most difficult to control. Our best results have followed the intravenous administration of 100 to 150 c.c. of twenty-five-per-cent dextrose. It must be freshly prepared, given slowly over a period of thirty to forty-five minutes, and at body temperature, by an experienced administrator. It should be given early, and if necessary six or eight injections daily. If given properly there should be no reaction. We have never found it necessary to control its use by insulin; however, we always keep in mind this possibility. In all postoperative shock conditions we find dextrose of great service, given in the above manner. Its values are many, but we recognize its potency as a general food substance, its general tonic effect upon the heart muscle, and its diuretic properties.

When transfusions are impossible because of lack of donors, the blood volume may be increased by the slow intravenous administration of normal saline solution followed by an intravenous injection of small quantities of concentrated dextrose at stated intervals.

The convalescent stage of major traumatic injuries is that period which follows the immediate postoperative recovery, and continues until the patient either returns to his original duties or the surgeon has completed his task of reconstruction. This stage has always been a most important phase of this type of surgery, but has never been so universally recognized among general surgeons as it is today. It is an important deciding factor as to the degree of reconstruction and the return of function.

It is a problem which requires intelligent and faithful service to the patient and adequate hospital equipment. Much credit is due the clever technician in the operating room where lives are actually saved, but the work as a finished surgeon is far from complete if he is lacking in the knowledge of convalescent care or fails in his duty to finish his task and thrusts his patient into the world as a permanent cripple.

Many events which occur in the life of a patient influence his recovery. We have learned by experience that a complete medical history and physical examination in all traumatic cases entering our service are important. This provides valuable information of past and present disease states and injuries which may play an important rôle in the convalescence of the patient.

Routine Wassermann tests occasion the discovery of many luetics who would otherwise escape notice. If syphilis is discovered, a thorough course of treatment is established which is essential, especially in cerebral injuries, fractures, and all types of wounds that fail to respond to the usual forms of treatment.

We have found it wise to give attention to all forms of focal infection, especially abscessed teeth, diseased tonsils, and infections of the genito-urinary tract, all of which retard and delay convalescence.

Many complicating conditions, such as posttraumatic neurosis, postconcussional headache, impaired chest function, disfigurements, delayed union of fractures, impaired function of the soft parts, and many others, should be detected and corrected before the discharge of the patient from the hospital. These conditions should be recognized early, especially injuries to the soft parts following severe contusions and those associated with fractures and local infections. Lack of proper attention to these factors is the source of the greatest and most prolonged disabilities.

A properly equipped physical-therapy department is a valuable adjunct in the physical reconstruction of traumatic cases, and is a great factor in reducing the convalescent period.

The subject of infection which is always im-

portant, and especially so in traumatic work, I have reserved for the closing of my paper.

Little if anything new has been brought out recently in the way of local or general treatment. Many old methods were rediscovered during the war, and their application fortunately has been worked out to advantage in several instances, such as the irrigation or Dakin method. The results justify its use when indicated. The rapid liquefaction of necrotic wound tissue associated with the beneficial results of wound irrigation produces an optimistic wound environment favoring local immunity and defense.

It is very doubtful whether the direct application of chemical antiseptics in the treatment of infected wounds is of any advantage.

The intravenous use of many chemical antiseptics, such as mercurochrome and the several other dyes, has been exploited at various times, but all have lost popular favor.

We are not as yet justified in recommending intravenous dextrose in the treatment of pyogenic septicemia. However, in acute toxemia following operation, its administration is decidedly valuable.

A method which seems logical is the treatment of streptococcic septicemia by the transfusion of blood from donors immunized with streptococcic vaccine. Although it is difficult to prepare donors for this procedure, I have had the opportunity to observe a successful recovery with this method.

In conclusion, I feel that the most logical way to treat infections of the human body is to treat them with respect. The surgeon should reacquaint himself occasionally with the concept of infection and the underlying principles of immunity and the factors which modify and influence infection. This appreciation, with a keen sense of the principles of prevention of infection, will serve him best in the absence of a panacea.

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PREOPERATIVE TREATMENT IN ACUTE ABDOMINAL DISEASE

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The treatment of acute abdominal surgical affections resolves itself largely about the prevention and treatment of peritonitis. It is this complication which kills or produces secondary conditions such as abscess, obstruction, and adhesions. Early operation in appendicitis, perforations, obstruction, etc., lessens the incidence of peritonitis and reduces the mortality to a minimum. Certain patients unfortunately develop symptoms insidiously, have masked lesions, resist early surgical treatment, or are carelessly examined and hence are undiagnosed until the disease is well advanced. Such patients present a problem to the surgeon as to whether it is best to operate immediately despite the handicap or delay temporarily in the hope of building up resistance and attempting to restore a disorganized physiochemical system.

Extensive laboratory investigations are rarely necessary in the group of cases about to be discussed, but occasionally they are of the utmost value. For instance, persistent vomiting results in a depletion of the blood chlorids and a shift in the alkali reserve. The loss of fluid causes a serious disturbance of the water balance of the patient. Estimation of the plasma CO_2 volume and blood chlorids will determine the necessity for pushing the chlorids. A rise in the blood nitrogen value is often an indication that the finely adjusted physiochemical mechanism has become disarranged. Efforts directed solely to technical surgical procedures in which no attempt was made to restore this mechanism to a balanced state may bring disaster.

Acute appendicitis occupies the major position in acute abdominal surgery by reason of the number of cases met and the fact that it strikes, often without warning, the young and robust more frequently than the old and feeble. We may state truthfully that at least 15,000 persons die annually in the United States from this disease, and that most of the deaths are unnecessary. The average mortality in first-class clinics is nearly four per cent.

All early cases, and all those with a local lesion should be operated upon immediately. Patients who have rapid infections should also be operated upon early. By this I mean that when the disease is progressing so rapidly that peritonitis is manifest in less than twenty-four hours, nothing is gained by delay. A certain number of patients, however, come to us about forty-eight hours after onset with distinct evidence of peritonitis and a depressed circulation. Often they have a low leukocyte count. Such should be given the method of treatment sometimes called after Ochsner, the keynote of which is complete abstinence from food or water by mouth and an abundance of water by the usual therapeutic methods. The delay before operation should not be measured by hours or days but entirely by the recovery of resistance. An improvement in the quality and a lessening in the rate of the pulse, a rise in blood pressure, a rise in temperature if it has been subnormal, disappearance of cyanosis, and an indescribable improvement in morale are the factors to be watched. We try

to give 5,000 c.c. of water in twenty-four hours, tap water by proctoclysis, saline solution by continuous hypodermoclysis, salt solution and glucose intravenously. The sitting position, ice bags to the abdomen for pain, morphin, and gastric lavage are adjuncts. In older persons digitalis may be useful, and caffein and "pitressin" are used when the peripheral resistance is low.

I am sure that patients are saved by some such plan of preoperative preparation. The question may be raised that such treatment can be instituted after operation and do just as much good, but I believe that intra-abdominal manipulation, even under local anesthesia, tilts the patient with lost resistance so that he does not always come back. With treatment, given before as well as after operation, he has a better chance. Experience determines the indication in the individual case; hence the family physician or internist always should advise operation and leave the judgment as to delay to the surgeon in charge.

Acute perforation of the stomach or duodenum has only one emergency problem, namely, diagnosis. No preoperative treatment is necessary except the relief of pain by morphin. Shock may occur at the onset, but I have never seen a patient shocked from this catastrophe by the time he reaches the operating table. The patient dies from peritonitis, and the extent of this complication is practically coincident with the hours of delay. The technic of operation is comparatively easy, and if done rapidly a single intravenous saline administration followed by the usual "peritonitis" regulation treatment is all that is required. We believe that these patients are susceptible to postoperative pulmonary complications, and recently have been putting them routinely in the oxygen tent.

Acute suppuration (empyema) of the gall bladder usually is manifest by sudden pain, marked tenderness, and rigidity in the upper quadrant, an exquisitely tender mass, fever, and after a time, leukocytosis. I rarely operate immediately in such cases. By reason of the anatomical situation of the gall bladder between the colon and liver, protective exudate forms quickly and under treatment great improvement occurs in about forty-eight hours. Proctoclysis of tap water and an intravenous injection of ten-per-cent glucose solution in 750 c.c. of salt solution is given every twelve hours. Hot compresses are applied to the upper abdomen, and morphin is given for pain. If jaundice occurs, a nice problem is presented in deciding whether a cholecystostomy should be done quickly. Generally, I delay until the cholangitis subsides, giving the glucose solution every eight hours.

Acute hemorrhagic pancreatitis is accompanied usually by marked prostration, partly induced by the intense pain. If the diagnosis is made definitely the usual procedure is immediate operation. Shock can be measured by the state of the blood pressure, and no patient should be operated upon until the condition of the pulse and blood pressure are satisfactory. Pain should be relieved. Morphin, glucose injections, pitressin, gastric lavage, and heat are useful. That some delay is justifiable has been shown by a recent paper from abroad comparing the statistics of immediate versus delayed operation, with the advantage in favor of delay.

Acute intestinal obstruction is perhaps the most important of the acute affections of the abdomen which the surgeon is called upon to treat. Acute appendicitis occurs more frequently, but the technical aspects of the other are so difficult and the mortality so high that it takes a higher place. Usually, we meet intestinal obstruction from three causes. Hernia, adhesions from operation, and carcinoma of the large bowel constitute almost the entire causal factors in the experience of most surgeons. Intussusception, volvulus, and other causes are quite rare in the experience of most of us.

The interval between the onset of symptoms and operation may be called the *time factor.* Vomiting and circulatory depression indicate the *toxic factor,* dehydration playing a prominent rôle. Each of the three principal types has certain features different from the others as bearing on treatment, but in all, the time factor assumes major importance in its bearing upon mortality. A skillful operation and careful preoperative treatment are of no avail if delay has allowed toxemia to overwhelm the patient.

Obstructed hernia offers no difficulty in diagnosis, and any death after operation can be traced almost always to delay. In my own series in the University Hospital, the average elapsed time from the onset of symptoms to operation was 1.3 days. We had a mortality of 3.5 per cent in those operated upon within twenty-four hours, and 26.7 per cent in those obstructed over twenty-four hours. Incarceration and strangulation cannot be differentiated clearly until the bowel is exposed; hence any obstructed hernia should be operated upon immediately. When patients are referred late with toxic manifestations, vomiting, distention, rapid pulse, low blood pressure, etc., we practice lavage and leave a Jutte tube in the stomach, give 1,000 c.c. of normal saline solution, and then operate under local anesthesia. Spinal anesthesia is dangerous if the blood pressure is low. At the conclusion of the operation, another 1,000 c.c. of salt solution

and ten-per-cent glucose are given, and hypodermoclysis started. Dehydration and loss of sodium chlorid must be met by correct treatment.

Obstruction from postoperative bands and adhesions occurs most frequently after operation for appendicitis with abscess or peritonitis. A loop of bowel becomes snared a few weeks or many years after operation, and often the symptoms at first are obscure, so that by the time fecal vomiting clinches the diagnosis the patient is sent to us in a very toxic state. It seems to me that any attack of abdominal pain after a previous abdominal operation demands minute attention to peristalsis, and if this is accelerated and gives a note to auscultation suggesting distended bowel, immediate operation must be considered. The physician in practice usually errs in placing reliance upon a successful enema which empties the colon only and of course has no effect upon the snared bowel. No wise physician would order a purgative in such a case.

These patients are usually highly toxic when admitted, and the mortality of operation is very high. If they are hard hit it is best not to operate for several hours, but to give saline solution intravenously twice at an interval of two hours and keep a Jutte tube in the stomach. If an enema has not been given, it is often useful in emptying the colon of gas, thus lessening pressure on the diaphragm. A simple enterostomy under local anesthesia may be the best temporary treatment. Enterostomy will not cure the patient with an abdomen distended from peritonitis; peristalsis must be present and the obstruction low in order to obtain any value from this procedure.

Carcinoma of the colon is an important cause of obstruction, and should be suspected when abdominal distention and pain occur in those past middle age. Usually, the low obstruction does not result in early toxemia, vomiting is not constant, and as most obstructions are on the left side, dehydration is not a feature. Obstipation is soon noted, and failure to obtain gas or feces by enema clinches the diagnosis. If the obstruction is evident, time should not be lost by a diagnostic barium enema, but operation should be performed immediately. The wise surgeon does no exploration in these cases, but performs a colostomy to relieve the obstruction and considers radical excision at a later time.

Experience teaches that many of these patients die from peritonitis resulting from leakage of feces at the moment of opening the bowel or from handling of the infected growth. If the patient is not toxic, opening of the colostomy may be delayed for twenty-four hours, but in those greatly distended with obstructed respiration and interference with the circulation, relief must be given at the time of operation. Efforts are now being made in some of the experimental laboratories to effect an immunity of the peritoneum to infection. This will be a brilliant achievement if successful. At present we can build up the resistance of the patient only by the free use of water given by the usual therapeutic methods, by stimulation of the circulation with appropriate drugs, and after a few hours by a colostomy done with aseptic precautions.

I can conclude by stating that patients suffering from infection or toxemia are affected by the manipulations of surgical technic, and if resistance is low they are so seriously affected as to succumb easily. The surgeon must endeavor to judge this resistance and by proper preoperative treatment, make operation safer. Dehydration is most important, and can be met with easily by the abundant use of water except by mouth. When vomiting is frequent or toxemia probable from obstruction, sodium chlorid must be given to make up for its loss. In toxemia from bacterial infection, the liver is usually affected, as shown in our clinic by the occurrence, for instance, of latent jaundice in most cases of severe acute appendicitis; hence glucose is given to support the liver. A state of low blood pressure can be helped by intravenous injections of salt and glucose together, with the use of a drug like pitressin. Glucose solution also acts as a diuretic and increases urine elimination.

It is well to remember several things in regard to the use of glucose. We are convinced that isotonic or slightly hypertonic glucose solutions are more satisfactory for intravenous use than are the hypertonic solutions so often dispensed. There are several reasons for this. A hypertonic solution or even an isotonic solution will spill over in the urine if given too rapidly. The more concentrated solution is more apt to do this. The glucose must be given very slowly if it is to be utilized by the body economy and not merely poured out through the kidney glomeruli. Then, too, convincing evidence has been brought forth that glucose cannot be utilized for conversion to glycogen when dehydration exists. To give a concentrated glucose solution to a seriously dehydrated patient defeats the very purpose for which it is being used.

In these sick patients cheerfulness and a hopeful word are valuable, and often an explanation of the reasons for withholding water by mouth eases a difficult situation. Careful attention to detail by the surgeon himself will save life at times.

1930 Spruce Street.

THE TREATMENT OF THE PATIENT BEFORE, DURING, AND AFTER OPERATION

S. J. WATERWORTH, M.D.
CLEARFIELD, PA.

It is a truism that there is a difference between a surgeon and a mere operator. The one should be a very good doctor first of all; the other is just working at a trade. The one is concerned with all about what he is cutting as well as how to cut; the other chiefly with cutting. The latter is still a barber surgeon. Hence, if we would wear the long robe worthily, we should consider the patient before operation apart from his particular disease. First, obtain as exact a history as possible. Then, have modern laboratory work done on his case before operation and during his stay in the hospital. Let us not lay away the stethoscope after operation, nor forget the stomach tube which often saves a life.

We all know the importance of preliminary preparatory treatment. For instance, a man is found on the highway, suffering from a compound fracture of the upper third of the thigh. He has been lying in the roadway for hours, and when admitted is in profound shock. Preliminary treatment is necessary—intravenous injection of warm saline solution or dextrose, perhaps blood transfusion to restore the patient before débriding the wound and reducing the fracture, not forgetting nor delaying administration of antitetanic serum.

In another case of fracture of the thigh in a women about thirty-two, who says that she has been suffering a nervous breakdown and at times is compelled to go to bed, one of the doctors said that it was from her heart, another that it was from her nerves, but there was one who said that she had a goiter which was causing her symptoms. This woman suffers from hyperthyroidism as well as the thigh fracture, and should be made comfortable by morphin, position, and support. Heavy doses of Lugol's solution should be given to her for several days. Then she may have her limb operated upon or otherwise reduced and will nicely stand the regrettable but inescapable slight traumatism and painful manipulations that are required to obtain satisfactory results in treating the fracture and which would have been poorly borne or might have been fatal on account of the toxic goiter if proper preliminary treatment had not been given.

Again, a man past middle age comes with the history of having bruised his foot and now is said to have gangrene. He has been advised that he will have to have an amputation. Examination of blood and urine reveals the fact that he has diabetes. Diet, insulin, and proper local treatment obviate the necessity for amputation, or at least for immediate amputation under unfavorable conditions.

In still another case, a woman, "fair, fat, forty, fertile, and flatulent," has been sick for the past two weeks with pain in upper right quadrant, distention, nausea, and jaundice. She has an irregular temperature. The diagnosis is obstruction of the common bile duct. Do we hurry her to the operating room and operate upon her as an emergency? No, instead she is given dextrose and calcium intravenously for several days, gastric lavage with hot saline solution two or three times a day, colonic irrigation, and possibly one or two small blood transfusions before operation. The first operation may be only drainage if it is thought that she is acutely septic. In these cases I have drained the gall bladder, given mercurochrome intravenously, and later removed the gall bladder, thus avoiding the danger of acute septic peritonitis.

May I cite a recent example of the efficiency of preoperative preparation: David K., aged 60, was admitted to the hospital January 2d, with dyspnea, auricular fibrillation, the abdomen filled with fluid, water-logged below the diaphragm, the blood pressure 190/130, a slight cloud of albumin in the urine, and hyaline casts. Some said he had Bright's disease with heart trouble. Our diagnosis was that he had a very toxic burnt-out adenomatous goiter. This man was treated with digitalis, ammonium chlorid, novasurol, and later with Lugol's solution. The result of the above treatment was that he passed about 150 ounces of urine each twenty-four hours for a few days until his edema had disappeared. After six-weeks' treatment a bilateral subtotal thyroidectomy was done, and now he is apparently normal. So much for the necessity of careful consideration of the case and institution of the proper preoperative treatment.

The immediate preparation of the patient is necessarily brief in emergency cases. In the chronic case we may plan for days ahead. In ulcer of the pylorus with edema and obstruction, we should use gastric lavage every six or eight hours, feeding in between small amounts of fluid carbohydrates. In the obstruction of carcinoma of the colon, colonic lavage should be given repeatedly, using large quantities of saline solution intravenously or by hypodermatoclysis and liquid petrolatum by mouth. In both conditions, repeated small blood transfusions should be given before and after operation.

In preparing a patient when the operation has been planned for days ahead, there being no emergency, a laxative should be given if there is no contraindication such as obstruction or peritonitis. The kind used is not so important as the time it is given. It should be given forty-eight hours in advance of operation in order that the depressing effects will have passed. The patient should then receive a diet with no roughage, abundance of carbohydrates, and forced liquids. The preparation of skin and operative field is so well standardized now as to make it unnecessary to discuss in this paper.

As to carrying the case through the operative ordeal: There has been much written on the choice of anesthetics. Apparently the more complicated and costly the apparatus and the greater the care needed to prevent explosion, etc., the more highly that particular anesthetic agent is lauded. I believe the simplest anesthetic that will do the work is the best, and that, to my mind, is either local infiltration, nerve block, or conduction anesthesia, using one-half or one-percent novocain, and often using light nitrous-oxid analgesia. I also often use spinal anesthesia. I believe that every surgeon should be an expert in all forms of local anesthesia. In the smaller hospitals and in emergency work, ether will still be the anesthetic mostly used, and if used as rectal anesthesia or with skill as inhalation anesthesia, it is still far from relegation to the garret of antiquities.

After the patient has been anesthetized and the surgical exposure has been made, if the area is the abdominal cavity, let us not present to the onlookers the spectacle of fighting intestines; but on the contrary wait until the patient has been thoroughly relaxed by the anesthetic, aided by extensive lateral infiltration of the parietal peritoneum with novocain. When the patient is well relaxed and we wish to expose and wall off the diseased area, we should not commit the crime mentioned by Morris of New York, the crime of taxidermy, but try instead so to plan the incision and retract the wound that a minimum of gauze walling-off is required. Let us pay heed to the writings of Crile, and expose viscera as little as possible, and in every movement we should practice anoci-association. Do not await the coming of the signs of shock before doing something to combat it, but as soon as the patient has been placed on the table for a major operation, especially if he is a bad risk or in shock, start the intravenous injections before the operation is begun and allow the warm restorative fluid to be acting while it is in progress. The patient should never be placed on a table in a position that would be a hardship to a well person if he had to remain there a half-hour to an hour. Thrombosis of the saphenous and popliteal veins is not infrequently caused by leg holders in gynecologic operations, and I have known bed sores to have their beginning from the pressure over the sacrum on account of insufficient padding of the operating table, as well as from a small blister due to iodin or other antiseptics used. It should be borne in mind that so-called postoperative pneumonia and other complications are always more frequent when the tissues have been traumatized by blunt dissection and undue force in retraction used. Let us be sorry for the sins of the past and firmly resolve to know our patient better, that we may attend to his needs better before as well as during the operation, and also during the postoperative period.

Postoperative care will demand our best thought and judgment always. Its conduct will be directly influenced by the pathology found, but, to use a Hibernicism, the time to begin care after operation is before the operation. The postoperative course may depend upon whether we are hasty and rough or gentle and painstaking during the operative ordeal. However, certain types of cases one has to actually live with day and night before really learning how to handle them. The postoperative care of a very toxic goiter is an example in mind. Oftentimes we have to make a choice of a close shave with morphin or a death from acute postoperative, so-called hyperthyroidism, which is favorably influenced in the great majority of cases by the liberal use of iodin in Lugol's solution, forcing fluids by every available avenue, maintaining rest, reducing fever, and feeding the patient.

Arnold Jackson has called attention to a method of feeding these extremely ill goiter patients, as well as certain others, which is often of great value in forcing fluid intake; namely, the inlying duodenal tube. The patient does not have to go through the act of swallowing, attended as it often is in these cases by pain, choking, and inspiration of fluids into the trachea.

In conclusion, I would say that the surgeon should always thoroughly weigh and pass in his own mind on the evidence tending to establish the diagnosis just as much as the internist, and that he needs to know the patient more intimately and be in closer touch with him than any one else if he is going to be successful in preparing him for and carrying him through the operation and healing him afterwards.

207 East Cherry Street.

ABSTRACT OF DISCUSSION

Of Symposium on the Surgical Patient

JOHN B. LOWMAN, M.D. (Johnstown, Pa.): I am heartily in accord with Dr. Weil's remarks regarding treatment of shock. I might say that there are different methods of preventing infection and reducing the mortality from infected cases. If you have a corporation that has its own hospital, as the Bethlehem Steel Hospital of Johnstown, you can reduce your mortality by perfect teamwork. Infections have been reduced from seven per cent to a quarter of one per cent in 12,000 cases by using this system. Every patient is treated by the same person from the time he is first seen until the wound is healed. In other words, the person treating him is put on a batting average, just the same as a baseball percentage is worked, and each infection is credited for or against him. If infection occurs it is discussed later to find out why—whether it is the fault of the surgeon, nurse, or first aid. And by this method we have reduced the percentage of infections.

Regarding compound fractures, the earlier they are seen and treated the less infection there will be. I can best illustrate this by referring to the Bethlehem Steel Hospital in our city, where we get our accidents from fifteen minutes to an hour after the accident has occurred. We see the compound fractures early. They are cleansed, and many of them are closed primarily without any infection, simply because of the fact that we get them early. In our other hospitals, where we get compound fractures from four to five hours afterward, we do have infections and these are the cases which we have to dakinize, open, and drain.

In speaking of blood-stream infections, I cannot quite agree with Dr. Weil. While we all know that mercurochrome is much talked of, I think the blood-stream infection is one place where it stands out. First, in a blood-stream infection, we must find out whether it is due to staphylococci or streptococci. I believe that blood transfusion is one of the best early treatments, followed, if a staphylococcic infection, by gentian violet given intravenously, and if streptococcic, by mercurochrome given intravenously. We all know now that careful observation and careful technic prevent many of these cases coming before the Compensation Board.

Acute abdominal conditions should be recognized early, and yet so many times are neglected, not always due to the doctor but sometimes to the family. We all know the old story of physic, wait until tomorrow and see what happens. The after-treatment of these cases is a very important factor. Dr. Muller speaks of intestinal obstruction. No doubt many of you are familiar with Orr's experiments on dogs showing decreased chlorids in the blood. By increasing the chlorids, he has prolonged their lives. Probably the same thing applies to the human being.

The question arises as to when to operate. If seen early, I believe operation should be done immediately, in twenty-four hours at least. If seen late we have the preoperative treatment to take into consideration.

Williams, in London, some time ago brought out a paper in which he noted the similarity between the cases of gas infection and acute obstruction. He investigated, thinking that possibly an anaërobic germ had something to do with it, and found there was a Welch's bacillus in the intestine. After some further investigation he made an antitoxin for the germ, and out of 256 cases he had only three deaths. It now appears that in conjunction with the intravenous injection of chlorids, this is a step forward in the treatment of intestinal obstruction.

RECENT ADVANCES IN THE DIAGNOSIS AND TREATMENT OF PNEUMONIA*

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NEW YORK, N. Y.

Among the recent advances in pneumonia I shall emphasize only a few which seem to me of practical value. A great deal of work is being done on this subject at the present time, not only in the field of bacteriology and immunology, but also in the field of physiologic chemistry. However, I will take up only certain features that seem to have a practical bearing.

First, I wish to stress the importance of the early diagnosis of pneumonia. A great many practitioners will not make a diagnosis of lobar pneumonia until frank signs of consolidation appear. This means usually a diagnosis on the third or fourth day. If we are going to make use of the modern specific treatment which now seems so promising, we must make the diagnosis of pneumonia at the earliest possible moment. There are certain signs and symptoms that can be noted which make the diagnosis almost certain. Lobar pneumonia is not difficult to diagnose, as a rule. For instance, if a patient with a cold has a hard chill, we should immediately think of pneumonia, because chills in this climate are rather significant in a man who has been previously well. Then, if there is a sharp pain in the side, with some pinkish expectoration and cough, the evidence is certainly very strong in favor of pneumonia. So far as physical signs are concerned, the most important was pointed out years ago by Dr. Osler—a diminution of breath sounds over the infected lobe. This is a very valuable sign, and taken in conjunction with a few moist râles, is very strong presumptive evidence of beginning lobar infection.

Among the other things which help in the early diagnosis should be mentioned the x-ray. In doubtful cases, a bedside x-ray machine is valuable. Very frequently a small shadow can be made out before physical signs are apparent.

I wish also to speak of the leukocytes, because in many hospitals the leukocyte count is not taken frequently enough. I believe every patient suspected of having pneumonia should have a leukocyte count. It also helps to differentiate pleurisy and empyema. The ordinary pneumonia white-blood count runs between 12,000 and 25,000, with a polynuclear leukocytosis of 80 to 90 per cent.

I wish to stress also the early examination of

*Read before the General Meeting of the Medical Society of the State of Pennsylvania, Erie Session, October 3, 1929.

the sputum. Early typing is essential because of the serum treatment, which may be used in some cases. Very frequently it is not possible to get sputum in the early stages of pneumonia, but it is fortunate that most of these patients are pneumococcus carriers at this time. With that in view, we take a swab from the posterior wall of the pharynx, wash the swab in one c.c. of sterile saline solution, and inject the saline into a mouse. The mouse method is now the universally accepted method of typing the pneumococcus. The actual presence in the throat of one of these forms of pneumococci, especially types I or II, is presumptive evidence in favor of pneumonia, for the reason that very few healthy throats show these types.

In several cases at Bellevue, where some of our colleagues did not want to admit a diagnosis of pneumonia, we have stressed the importance of finding these types of pneumococci in the sputum. The Rockefeller workers showed years ago that it was extremely unusual to find these types in the normal throat. I am glad to say that Sabine has recently developed a rapid method of sputum typing. The mouse is injected with sputum, but instead of allowing the mouse to die and waiting twenty-four hours for the laboratory report, a glass pipette is inserted into the perineum of the mouse three hours after injection, a few drops are drawn out, and a diagnostic agglutination test made. These agglutinations are very much like the Widal reaction, and yield a report from the laboratory in three hours, so that it is now possible in a case of suspected pneumonia to get a swab with a little sputum from the patient's throat, send it to the laboratory, and in three or four hours have a report. We have been checking this method with the older mouse method, and can find practically no error so far as the short method is concerned.

Another useful laboratory test is the blood culture. About one third of all pneumonia patients have a positive blood culture. Blood cultures should be taken if one cannot get sputum. They have a prognostic value because the outlook is better when the cultures are sterile.

What of the different types? Type I pneumonia is the commonest type at Bellevue—about 35 per cent of all pneumonias. It is the pneumonia of young people. It is quite common in boys and girls, and even in adults; 42 per cent under thirty years of age have type I. Type I pneumonia is rather mild compared with types II and III; it runs a death rate of 20 to 30 per cent. Another characteristic of type I is its tendency to develop empyema—almost twice as frequently as other types.

Type II pneumonia is the pneumonia of septicemia. The death rate runs about 50 per cent. For that reason we look upon it as the most severe form. Type II occurs more frequently in younger people, but is seen in all ages. Types I and II are seen in men more than in women.

Type III pneumonia is also very severe, as pointed out by the Rockefeller Institute workers, and runs a mortality between 40 and 50 per cent. It is chiefly dangerous because it is the pneumonia of elderly people, particularly women. In our pneumonias at Bellevue in women over fifty, one third are type III. So it can be seen that the incidence of pneumococcus types and the death rate depend a good deal on age and sex. Type I is essentially one of young people, and type III of elderly people, particularly women. Of course, these types can occur at any age. I have seen type I in a man of eighty, and I have seen type III in young children. But these are exceptions; the study of large groups of figures shows that the former statement is true.

Type IV is the wastebasket group, and is really not a type but a group of pneumococci composed of many types. Dr. William H. Park is giving these groups numbers, so that we shall soon have, instead of four groups, ten or twelve. But types I, II, and III are called the fixed types and predominate. They constitute together 65 per cent of all pneumonias in adults. The other 35 per cent are made up of small groups, not so virulent as the fixed groups. These groups are important because some of them may prove amenable to serum treatment. Types I and IV are the milder forms; types II and III are the severe forms, the death rate being about twice that of types I and IV. But types I and IV kill almost as many people because they are the common types. It is fortunate that the mild pneumonias are frequent and the severe types rare.

Just a word should be said about streptococcic pneumonia. It is comparatively rare in civilian life. We see a few cases every year, in both general and hospital practice. They usually come in the late winter and spring, and the death rate is 35 to 40 per cent, with a very high incidence of empyema.

So much, then, for some of the advances that have been made in the general and bacteriologic diagnosis of lobar pneumonia. When we come to the treatment, great advance has been made in our knowledge not only of symptomatic treatment, but of specific treatment. Recent studies of digitalis showed a death rate 10 per cent higher in patients who were given digitalis than in those doing without. This surprised us because we had always presumed that digitalis was

not only rational, but actually helpful to the patient. Our disposition now is to limit digitalis therapy to those who show some evidence of previous myocardial disease. We use alcohol only on alcoholic patients. Caffein and adrenalin are the favorite stimulants. We use both when occasion arises. Patients with lobar pneumonia are apt to have sinking spells, during which there seems to be a temporary collapse of blood pressure. At this time a series of adrenalin injections, seven or eight minims each, will often have a very happy effect on the patient and tide him over what might be a fatal ending. These injections are given every fifteen or twenty minutes for six injections, when we stop for two or three hours and watch the patient.

For distention we treat with pituitary extract, soapsuds enemas, and turpentine stupes. Recently, Dr. Paul Reznikoff has been very enthusiastic about the use of strychnin sulphate as a prophylactic against distention. He thinks it has distinct value in this respect and as a deterrent of intestinal paresis. For pain and cough we use codein, and when these symptoms are marked, morphin should be used. The old argument concerning the value of morphin in the treatment of pneumonia is still active. My personal feeling about morphin is that it is a valuable drug in pneumonia, particularly in the early stages. I have never seen morphin shorten the life of pneumonia patients except those in the moribund stage, and certainly in the early stages of the disease I have never seen anything but happy effects from its use. I believe there is some evidence that it increases cyanosis, but this is not marked.

Coming now to the cyanosis due to anoxemia, we must say something about the methods of using oxygen—the oxygen chamber, the oxygen tent, and the oxygen tube. We can make use of the chamber only in certain institutions. The tent, which is practical, particularly in institutions, can be used also in private homes, although with some difficulty. The tent is a troublesome thing to set up and keep going in a private house, and there is the danger of the patient getting delirious and pulling the tent down. There are disadvantages in the tent, but, on the other hand, if it is properly run, and the ventilation kept up, the tent gives the patient a great deal of comfort. The most important effects are improvement in the color of the lips and skin, a decrease in pulse rate and respiration rate, and the general improvement in the appearance of the patient. Just how much oxygen therapy affects the death rate, we are not certain. It certainly gives the patient comfort and is a rational form of therapy. These patients do not get enough oxygen, and it seems rational to try to give them a better oxygen supply.

The method that is most practical in the use of oxygen is the tube with a high pressure tank. This can be set up without much trouble, and with the tube in the mouth allows the oxygen to go in directly. By means of a gauge on the top of the tank one can tell how much oxygen is going in, and by the tube method we can give the patient 35-per-cent oxygen. This is cheaper for the patient, easier to run, and seems almost as satisfactory as the tent. The oxygen has a tendency to dry the mucous membranes, so vaseline should be used in the mouth and throat.

One of the most interesting developments in oxygen therapy is the use of the oxygen tent at the Mayo Clinic as a prophylactic against postoperative pneumonia. A large series of operative cases reported from that institution show a marked diminution of postoperative pneumonia.

Now we come to the question of specific therapy. As is well-known, serum therapy first came to prominence when pneumococcus type I serum was reported on favorably by the Rockefeller workers about fifteen years ago. They showed a drop in mortality for this type from 25 to 10 per cent. Since that time it has been used to some extent in private practice, but the use of serum in type I pneumonia is not practical in private practice since it necessitates giving 100 c.c. of horse serum three times every twenty-four hours. For that reason type I serum has not the popularity it deserves. Nearly all studies of this form of therapy have shown its value, and those who have really worked with type I serum feel that it has a distinct therapeutic value. During the past three years we have been working with a concentrated antipneumococcus serum. This concentrated solution was worked out by Felton of Harvard. In appearance it resembles concentrated diphtheria antitoxin, and according to our tests is ten to fifteen times as concentrated as the ordinary type I serum. A concentrated serum has also been worked out for type II infections. The original contention of Cole was that type II serum had no therapeutic value, but our feeling is that while type II serum is not so brilliant in its therapeutic effect as type I, it still should be used, and we hope that by improved methods of concentration we can make the type II product as effective as the type I has been.

Our system of testing Felton's serum at Bellevue has been to give it to every other patient with types I and II pneumonia. Patients are first typed and the serum administered to those who

show type I or type II. The method of actually handling the cases is as follows:

The diagnosis is made, and sputum is sent at once to the laboratory. A drop of horse serum (1:10) is put in one eye and watched for fifteen minutes. If the conjunctiva becomes red, it means that the patient is sensitive to horse serum, and that serum treatment is contraindicated. Very few patients show such a reaction, and if there is no history of asthma or hay fever, we then proceed to give the first injection of concentrated serum intravenously. The protein content of this serum is quite low, so that the patient's tendency to have a reaction is much less than with standard serum. We have very few cases of serum sickness, whereas with the old type of serum it was almost a universal sequel. We inject 5 c.c. very slowly into the vein of the arm, watching the patient closely, and with a syringe of adrenalin at hand. If there is no reaction after two hours, we give a larger injection of 10 or 15 c.c., following with another two hours later, trying to give about 50 to 60 c.c. in the first twenty-four hours. Each centimeter contains at least 1,000 units, but sometimes 2,000 or even 3,000 units of antibody. The standard strength is 2,000 units, and we try to give the patient 60,000 to 75,000 units during the first twenty-four hours. It is advisable to give as much serum as possible the first day, because this is the time when the disease yields most readily. However, we do not feel that type I serum should be withheld because the patient is seen on the third or fourth day. In type II pneumonia it is not worth while to give serum after the first three days of the disease. For types III and IV we have no serum treatment at the present time. The second day of treatment the number of serum injections is governed by the condition of the patient. If the patient is better, we cut down the number of doses. If the patient shows no improvement, we force the serum again on the second day. By the third day the patient should be much better; if not, it is probably a waste of serum to continue. We usually discontinue intensive treatment on the third day.

The results with type I have been very satisfactory, as much as any serum we have ever seen in infectious disease. With type II the results are not so brilliant, but sometimes the temperature drops quickly if the serum is given early in the disease.

The antipneumococcus serum is supposed to operate directly on the pneumococci, the idea being to anticipate nature's course, fill the system with immune bodies, and thus induce the crisis earlier than would occur in the natural course of events.

So far as the practical application of the serum treatment of pneumonia is concerned, it depends on accurate and prompt typing of the sputum. I think Cole was right when he said that type I serum should be used only in type I cases, but on the other hand, if it is impossible to get the sputum typed, one might be justified in giving polyvalent serum to a young man or woman with an untyped pneumonia, because in all probability, in two cases out of three, the young man or woman would have types I or II pneumonia. On the other hand, if one is dealing with a pneumonia patient sixty or more years old, in two cases out of three the type will be III or IV. So the chances are against serum treatment being indicated. I think we might readily consent to serum treatment without bacteriologic examinations in a young person, but it would be a mistake in an elderly patient. I believe the rapid method of typing, when it comes into general use, will make typing easier and more practical, and make it possible to give serum on the first day pneumonia is diagnosed.

33 East Sixty-first Street.

Training in School for Deaf.—New York City's School for the Deaf, said to be the largest of its kind in the world, is training 440 deaf children to speak, teaching them the same course of study that normal boys and girls follow in the elementary schools, and fitting them for various vocations. The following informal report on the work of the school was made recently by the principal:

The greatest and first difficulty is to teach the children to imitate and practice sounds they have never heard. They learn to understand what people are saying by means of lip reading, as the sign language is not taught in the school. The elementary sounds are taught to the pupils by means of mirrors, which help them to see if they are making the same motions normal persons make when they utter various sounds.

About two years are spent in teaching speech, and then the children are ready to begin the elementary course of study. Thus they stay ten instead of eight years in school. In time they come to speak English well, although, not being able to hear, they are deficient in the use of slang. Ninety-five per cent of the graduates of the school succeed in obtaining suitable positions after graduation. Some of them pursue more advanced studies and make good students. The principal denied, however, that they develop special aptitudes to a greater degree than normal children. Although their other senses are not abnormally keen, their power of concentration is very good. Because of their restricted contacts, the deaf children remain frank and unaffected. The classes are small, enabling teachers to give individual instruction. There is no truancy problem.—*N. Y. Times.*

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Editorials

NEW YEAR'S GREETING

The JOURNAL wishes its readers a happy and prosperous 1930!

As another year rolls around let us profit by the experiences we have had, and enter the next year filled with enthusiasm for greater service to humanity and organized medicine.

Many of the county medical societies will soon be conducting their annual election of officers. Members of a county medical society should have uppermost in mind that to be elected to office is a genuine call to service for the local society and organized medicine in general, and not a recognition of years of practice or long residence in the community. Officers elected on the latter basis rarely if ever prove of any value to their organization. Each county society owes it to its own best interests to elect to office men who are interested in organized medicine, and who are willing to give the time and attention to the activities of their respective society.

The New Year finds us facing important conditions, some new, some a continuation of former endeavors. There will always be arising in organized medicine new and complex problems, which must be solved to the best interests of the public and the medical profession. This can be accomplished only by coöperative action on the part of each member as a unit, thus assuring the coördinate support of the county medical societies, which means successful fruition of the activities of the State Medical Society. Let us urge you to bear in mind that only by group action can your State Society accomplish the greatest good for the public; and it is the public whom we serve.

Periodic health examinations; prenatal care and better obstetrics to reduce maternal morbidity, and maternal and fetal mortality; postnatal care, further to reduce the mortality of infancy; proper care of children of preschool age; diphtheria immunization; the activities of public-health legislation; preventive medicine, with every physician a public-health officer; lay education; closer association between the professions of medicine, pharmacy, and dentistry, etc., etc., are all problems of vital interest to every physician.

Each physician must be alert to the demands all these problems make upon him, and he should coöperate to the fullest, that organized medicine may show wonderful accomplishments at the end of another year.

THE RETIREMENT OF MISS BLAIR

Miss Mary Stewart Blair who has been connected with the JOURNAL since the headquarters of our State Society were established at Harrisburg nearly ten years ago, and who has rendered signal and efficient service in all the activities connected with the office, more especially in her duties pertaining to the JOURNAL, has tendered her resignation.

Miss Blair has accepted an appointment in the editorial department of the Cleveland Clinic, Cleveland, Ohio. Best wishes are extended to her in her new field of endeavor.

It affords us pleasure to announce that Mrs. Mary A. Yerger of Rochester, N. Y., formerly editor of the scientific publications from the Research Laboratories of the Eastman Kodak Company, has been elected Managing Editor to fill the vacancy caused by Miss Blair's resignation.

"GREAT MEN'S WEAKNESS"

The magazine *Time*, in various issues devotes space to medicine. In the issue of December 23, there is an article entitled "Great Men's Weakness," which begins: "Prince Bismarck, President Wilson, President Harding, 'Tiger' Clemenceau, Napoleon III and Alexander Dumas *fils* had only one weakness in common: prostatic hypertrophy."

The article is illustrated with pictures of Wilson, Bismarck, and three fellow sufferers, Poincaré, King Haakon of Norway, and King Fuad of Egypt. Reference is also made to the following notables who have prostatic hypertrophy: Irigoyen of Brazil, King George of England, President Doumergue of France, and President Masaryk of Czechoslovakia.

In discussion of the condition itself, the article

contains the following references. "Authorities estimate that one of three males over sixty suffers from prostatic hypertrophy. Gonorrhea in early manhood is a frequent, but by no means the sole cause." This reference is amplified by the following footnote: "Dr. Winfield Scott Pugh, famed Manhattan genito-urinary specialist, estimates that four out of five males have or have had gonorrheal infections."

Organized medicine is the greatest proponent of lay education, but under proper medical supervision and control, in order that the public may be intelligently advised in regard to health matters. The statement just quoted is most unfortunate, and any one reading it would naturally ask which four out of five of the several notables referred to in the article are gonorrheics.

No one can read an article of this kind without resentment. The imputation is most insulting. What inference can be drawn by readers of this reference other than the fact that gonorrhea is the most frequent cause, notwithstanding the qualifying statement "but by no means the sole cause." Readers who have relatives or friends suffering from hypertrophied prostate naturally will do some deep thinking. Again we repeat, this kind of lay education is vicious, and to be unqualifiedly condemned.

Next appears a description of the anatomy of the prostate, which makes the rather startling and illuminating statement: "Anatomically it corresponds to the womb." This may cause many people to wonder why men do not menstruate, or even share the household burden of maternity.

Physicians will be interested in the following reference to the secretion from the prostate gland: "the physiological function of which is to increase the swimming speed of the microscopic male seed from a sluggish low to a high of one inch in two minutes." The writer of the article evidently is not conversant with the fact that it is the degree of acid reaction of the vaginal secretion that kills, retards, or stimulates the activity of the spermatozoids.

The article concludes with the very absurd statement: "A queer thing is the fact that when a man with hypertrophied prostate dies, the swelling speedily disappears. Postmorticians cannot get the gland enlarged (for laboratory work) from cadavers."

This concluding statement shows such gross ignorance on the part of the writer of the article that the medical profession should realize why it must control lay education in medical matters.

Newspapers and magazines are prone to give much publicity to medical matters, and lately especially so in regard to radium, commenting on its rarity, high prices, its remarkable therapentic qualities, and other references. It is natural, and regrettable, that erroneous statements frequently appear in these articles due to the fact that there is no physician on the newspaper staff to edit its medical news.

A recent press account stated that the million dollars worth of radium owned by New York City hospitals will "in a million years" still be emitting the wonderful healing rays in the strength it does at present. Scientists agree that radium loses its energy in about 1,760 years, or at the yearly rate of about four hundredths of one per cent. This fact is determined by the electroscope, which accurately measures the gradually diminishing energy of radium. At this juncture it would be of interest to know how much owners of radium charge off for depreciation each year in submitting their income tax returns.

Many people who would be benefited refuse radium treatment because of the false statements contained in these articles regarding the dangers of radium. It is most unfortunate that the people are misguided by the extravagant language of newspaper publicity.

The public should be informed of the advances made in the sciences, and in order that the publicity relating to the achievements of medicine may be properly released, a medical censor or adviser for the lay press dispatches would not only ally the better newspaper interests of the country with true professional science, but would serve to differentiate the decent and self-respecting newspapers from those very indecent and nonself-respecting publishers who, body and soul, are owned by their quack advertisers. Not only would the censor save the newspapers from making most ludicrous and stupid blunders in their desperate attempts to report medical events, but he would prevent the outrageous ignorance from becoming more deeply jammed in the minds of the people by the authority of the newspaper.

Usually the medical chroniclings of the daily press are in about equal degree humorous and nauseating to the medically educated man. For very self-interest why do not these "educators of public intelligence" learn to do their work better? Every now and then a press account is to be seen describing how "the eye is laid on the cheek" in order to remove a foreign body, or describing the extraction of steel from the eye by a magnet "as the eye came nearer and nearer, the magnet, attracting the bit of steel, drew the eye from the socket."

The newspaper is bound to draw the eye from the socket in some way or other, and it is in exceptional luck when at one swoop it cannot do so in the case of both patient and reader.

OCCUPATIONAL NEUROSIS OF PIANISTS

It is unfortunate that piano teachers generally are unaware that a true occupational neurosis can be caused by overapplication to piano practice. This is a point that is seldom mentioned in schools of music, is never stressed by music teachers, largely from ignorance of the danger, and is completely unknown to parents.

The disorder may assume several aspects. There may be merely a general obscure neurasthenic state; or, much worse, there may be a true "piano-player's palsy," exactly identical with the same affection of scriveners; or there may be (and usually is) a combination of these two. In the latter type the arm may be painful, contractured, paretic, and even slightly wasted, while the more general neurasthenic symptoms present a syndrome of cerebral, spinal, and gastric derangements which is characteristic and easily recognized. In this country such cases are occasionally seen in any stage from mild to aggravated, but they are not so common as abroad—probably because we have not yet become such a nation of "piano punchers" as the Germans and English.

The fault lies largely with the system of music instruction which places such undue emphasis upon hours of practice and strenuousness of effort. Cases have been known in which young women were allowed, if not even encouraged, to practice at the keyboard for seven and eight hours a day, with disastrous results. In one case there was disablement of the arm with distinct neurasthenia of more than a year's duration as a consequence.

It is highly desirable that physicians make their influence felt in the centers of musical learning to the end that all prospective teachers of the art be given instruction in the laws of health. The wise teacher knows from experience that it is a help to musical progress occasionally to discontinue practice for a week or more. The student comes back in better physical and mental condition, and works to much better effect after such a rest period. It is a curious psychological fact that more gain seems to be made in learning a given musical composition between the periods of practice than during the active work at the keyboard. Only so much can be accomplished during a practice period, even though it be prolonged. Then time must be allowed for consolidation of the skill acquired. Furthermore, purely mental practice may be equally or even more effective than physical practice. The very young child requires the manual effort as an aid in concentration; but the more advanced pupil can and should be taught to study every composition away from the piano. This method results in a more thorough knowledge of the given lesson, and is a vast saving of the intricate physical mechanism which so easily becomes "stale." If this beginning "staleness" is watched for and duly treated by an appropriate rest period, there will be no possibility of the development of an occupational neurosis.

There is a distinct need for teaching of this type in conservatories and colleges where music teachers are trained. What is true of the piano player is equally and perhaps more true of the singer, and certainly of any other player of stringed or wind instruments. The physician may well take the lead in adding this health instruction to the musical curriculum.

THE IMPORTANCE OF PATHOLOGIC RESEARCH

The importance of pathologic research and the intimate relation that such research bears to clinical medicine and surgery are questions that, of recent date, have been accorded a considerable amount of attention. The necessity of establishing research laboratories in connection with medical schools having long been conceded, it augurs well for the future of American medicine that efforts are being made to remedy defects of this nature wherever they exist. It seems, however, that the equal necessity of establishing and thoroughly equipping similar laboratories in connection with hospitals that are not, in the strict sense of the word, teaching institutions is being more and more appreciated. Commendable as is the establishment of laboratories in connection with medical colleges and hospitals attached thereto, deserving of still more encomiums are they who disinterestedly found such laboratories in connection with general and special hospitals.

It is idle, of course, to state that pathologic research is of purely scientific value, that it lacks practical importance, and that its results are not adaptable to the wants of the practitioner of today. Equally idle is it to say that the busy practitioner himself cannot engage in valuable scientific research. To controvert such statements we have but to refer to the example of Jenner; of Koch, who discovered the tubercle bacillus at a time when he took an active interest in practical medicine; of Laveran, who discovered the malaria hematozoön when occupied with the duties of a French army surgeon in a foreign land. As a matter of fact, pathologic research is of paramount importance from etiologic, diagnostic, prognostic, and therapeutic standpoints. It is an axiom that no one can

expect to resist successfully the onslaughts of disease unless he be thoroughly conversant with the nature of disease itself. It is because of this that the study of the etiology of disease almost entirely usurped the attention of scientific investigators until within the past few years. More recently the results of these patient investigations have borne fruit in the great attention now being devoted to the therapy of disease conditions. The more assiduously, the more thoroughly, we investigate the etiology of disease, the more likely we are to establish a rational system of therapeutics and, what is more important, prevention of disease.

Pathologic research has not only considerably increased our ability to diagnose certain disease states by affording us means for the detection of the causative agent, but has also pointed the way for the recognition of the disease even when the pathogenic agent may not be recovered from the infected body. Tuberculosis, malaria, anthrax, diphtheria, gonorrhea, typhoid fever, etc., are readily distinguished by the detection of the specific infecting organism in the particular case, but in the absence of isolation of a specific organism, some diseases may be recognized by observation of the effects of the products of the specific infective agent.

It is not bacteriologic research alone that has been productive of such lasting benefit to mankind. The study of the etiology of other diseases that are probably not of an infectious nature, but dependent upon disturbances of metabolism and of the internal secretions of the body, etc., has been equally productive of good. Witness the marvelous results that attend the exhibition of thyroid extract in cases of myxedema and cretinism—a treatment based upon animal experimentation and clinical observation. It is quite obvious that in the study of the internal secretions, both of the ductless glands and those provided with an excretory duct, we are but entering a domain replete with highly interesting and important data. When we learn more of the functions of the thymus gland, of the thyroid gland, of the hypophysis, of the adrenals, of the spleen, of the lymphatic glands, etc., we shall be in a position better to appreciate the disease conditions consequent upon their derangement, and to institute rational therapy.

The beneficial results attendant upon the study of pathologic histology are universally acknowledged and require no reiteration. The marked improvement in the results of the operative treatment of tumor formations is to a considerable extent the consequence of histologic investigations of the nature of new growths and their mode of dispersion.

Thus, the important feature of all pathologic research, be it pathology, histology, pathologic chemistry, bacteriology, or animal experimentation, is the immense practical benefit to mankind in general to be derived therefrom. And it is the hope of assisting in its achievement that actuates most workers in this field. However, what is wanting throughout the country is the means of research, the requisite facilities, which comprise the necessary buildings, the necessary apparatus, and the necessary salaries to be paid to the trained investigators.

MANNER

There is undoubtedly a large element of truth in the observation that manner has more to do with a physician's success than his scientific attainments or his therapeutic ability. Many a man is willing to charge his ill success up to "luck" or to the dishonorable practices of rivals, when it is all due to some little personal defect of speech or gesture, some lack of office tact, some unnoticed method of doing his work which sticks in the memory of patients like a bur, and finally causes them to discontinue an unpleasant association. To the question, "Why did you leave Dr. ——?" the answer is not that he was not a good physician, but that "he smiled too much," "he was too coarse," "he thinks more of his fee than of his patient," "he is too much stuck on himself," etc.

We suspect that the decisive factor often responsible for the manners of physicians will be found in the large psychologic law that men naturally make up for a deficiency of matter by extra attention to manner, and vice versa. We mean that if a man's whole mind and attention have long been riveted upon one subject (disease and its cure); if his desire has been to learn the truth and help his patients, naturally he forgets the influence of manner. Too close observation of the disease makes the doctor forget himself—nay, the patient is also forgotten. One of the most scientific and capable surgeons we have known was habitually harsh and brutal to every patient.

On the other hand, it is very patent that lack of scientific knowledge or therapeutic skill sometimes leads to a thoughtfulness about manners that wins hundreds of duped patients. This, *par excellence,* is the sin of sectarians and semi-quacks. They do not know the methods of diagnosis, the signs of disease; their minds and training are too weak to pursue the subtle methods of differential diagnosis to the end, and in default of this they play the suave, gentle, sentimental, or gentlemanly game to hide their

ignorance. We have in mind one so-called doctor who does not know plastic iritis when he sees it, and if he did he would not know enough to order atropin. He visits often the patient whose eye he is blinding, says the disease will be of long duration, he plays with the children, everybody loves him, his bill is high, his patient is blind.

EUTHANASIA

Every now and then references appear in the daily press, either in the news or the editorial columns, to cases in which death would be merciful, involving, of course, the problem of euthanasia.

It is needless to reiterate that there is no legal right to take human life, even when it would be an act of mercy. The assertion was recently made in a newspaper editorial that "where patients are suffering the agony of incurable disease, beyond the power of soporifics to alleviate, physicians sometimes do hasten the inevitable. If it is a fact that doctors at times do comply with the desire of their patients for death, it is unthinkable that the responsibility for such compliance should be left to the doctor alone. The ends of humanity might be served by the provision of a board of skilled physicians which could be called into consultation when such a dread expedient is deemed in the best interest of the sufferer."

It would seem unbelievable that the editor of one of the most important newspapers of his section of the country would make the statement that "physicians sometimes do hasten the inevitable." His editorial was provoked by the fact that the German Reichstag recently had before it a proposal, which was rejected, to authorize such a procedure. It appears that the reason for the recent agitation in the premises was due to a dispatch from Paris, where a twenty-year-old youth is under arrest for shooting his mother. He had witnessed her sufferings from cancer, and, he says, acceded to her pleas to put her out of her misery.

PARADES AND THE PRACTICE OF MEDICINE

We claim to be just as patriotic as our neighbors, and perhaps even a little more so. Like every true American we like a military parade, and even hope that the day may yet come when we shall see the naval officers on horseback instead of riding in carriages. We realize that it is in the nature of parades to obstruct traffic, and we can bear our share of the inconvenience with equanimity. But it is part of our function to speak in the interests of the sick—the poor unfortunates who must stay in bed while the soldiers and bands march on. These invalids require attendance, doctors must be on the go, consultations must be met, hospitals must be visited, operations must be performed, and women must be confined. When a parade is more than a half-hour in passing a given point, and a hurried physician is on the wrong side of it and cannot break through, either on foot or in a car, and is losing time and patience (perhaps even patients), the point of professional endurance is passed!

In parades of any kind of undue length, the police should open a way through at stated intervals.

JOTS AND TITTLES

Science and Research

Professor I. S. Falk, of the University of Chicago, claims that he has isolated the influenza germ and is able to reproduce the disease in small animals.

Dr. Clyde E. Keeler, of the Harvard Medical School, reported to the National Academy of Science, Washington, that he has found a strain of house mice that inherited twisted noses. The nose was twisted because there was a shortening of one of the nasal bones while the other bone grew to its normal length.

The British Westmoreland Field Commission for Cancer Research believes it has evidence to show that cancer is caused by a specific, minute, endocellular parasite that attacks animals and humans indiscriminately. The Commission reports that certain villages in Westmoreland County are free from cancer; others suffer heavily.

Representative Dyer of St. Louis, Mo., has introduced a bill that provides for the establishment in the Department of the Interior of a laboratory to study abnormal classes and collect sociologic and pathologic data, especially such as may be found in the institutions for the insane, dependent, defective, and delinquent classes. Mr. Dyer explains that the purpose of this bill is to prevent and lessen social evils through knowledge gained by the scientific study of their causes.

The Medical Association of the State of Wyoming has announced that one of its members, Dr. Edward S. Lauzer, has discovered a cure for cerebrospinal meningitis. Dr. Lauzer explained that by means of a syringe he extracted fluid from the spinal canal to eliminate pressure. When this pressure was reduced to the point desired, he injected the spinal fluid into the gluteal or pectoral muscles or any considerable muscle. The reaction is claimed to be natural and immediate.

Water Supplies from the Ohio River Taste of Chlorophenol

The taste and odors of phenols and allied substances have affected the upper portions of the Ohio River. In a search to determine the specific causes, the United States Public Health Service found that during and since the war period the coke-producing industry has abandoned the use of the older beehive ovens and has substituted modern by-product plants, so that valuable substances are recovered from the gases which formerly went to waste in the atmosphere. The residues from

these recovery processes contain tar, phenols, cresols, creosotes, and similar substances, which, when discharged into sources of water supplies, produce characteristic tastes and odors. The total amounts of phenols resulting from the operation of coke by-product plants are so much greater than those produced by any other single industry, and their production takes place in such concentrated areas, that much of the responsibility for the difficulties caused by wastes of this class logically has been attributed to them.

Other workers have shown that the oxidation of phenols, which can be accomplished by ordinary biologic processes of sewage treatment when phenolic wastes are mixed in proper proportions with sewage, is essentially a biochemical phenomenon, and proceeds along definite time-function curves at rates varying closely with the temperature. As the behavior of phenols in the Ohio River has been consistent, except in degree, with their reactions to artificial processes of oxidation, it is logical to infer that the progressive reductions thus observed under natural conditions may be due to a process of natural biochemical oxidation similar to that which proceeds more intensively under artificial conditions. If this theory is correct, it may be applied to problems involving the elimination of sources of phenol pollution of water supplies.

Bureaucratic System of Federated Charities

In an address delivered December 10th, before the Woman's Club of Philadelphia devoted to the welfare of crippled children, Rabbi William H. Fineshriber referred to the drinking water of Philadelphia as "medicated pollution." He hoped that the day would come when the inhabitants of Philadelphia would be able to stop drinking water that is nothing more than doctored-up sewage. The address was made directly on social agencies and their "bureaucratic" system of organization. He praised the type of philanthropy carried on by the Woman's Club, at the same time pointing out "the dangers and difficulties" of welfare federations.

Rabbi Fineshriber considers that properly conducted clubs have a very definite reason for existence because federated charities become too mechanical in their processes. Clubs cut the red tape and get down to the definite source of need. He considers that in the organized charity groups the work is delegated to amateurs or to professional workers who have become callous. Many millionaires give great sums to bureaus and federations. They do not know the real joy of giving.

Pennsylvania Penal System

In a report of the National Society of Penal Information, of New York, received at the end of November, rather severe criticism is made of the Pennsylvania penal system.

Among the charges are the following: The problem of suitable administration of the prisons has not been solved by the State authorities. Friction and clashes of authority in their management are noted. Employment is given to too few prisoners. The new penitentiary at Gratersford disregards the best modern penal opinion favoring small prisons, in that several thousand prisoners will be confined under one roof. Prison educational work is "woefully inadequate." The report commended the high morale at Western State Penitentiary in Pittsburgh, declared the vocational education at Huntingdon is the best to be found in an American reformatory, and paid a tribute to the Women's Reformatory at Muncy.

Dr. Louis N. Robinson of Swarthmore, director of the Pennsylvania Committee on Penal Institutions, has stated that the present system of divided control and divided responsibility in our State prisons has not worked. The confusion is due to the fact that the management of our State institutions lies with the local authorities, whereas the employment of the inmates in these same institutions is controlled by the State Department of Welfare at Harrisburg. Dr. Robinson distinctly sets forth that what Pennsylvania needs is a State Department of Correction which would have charge of all the prisons and centralize everything connected with them.

As to lack of employment for the prisoners, it should be borne in mind that under a Pennsylvania State law, prison-made goods cannot be sold to private individuals or firms. Therefore, if the State departments do not buy their products the prisoners have little to do. Other states have a law making it mandatory for their various departments to purchase supplies from the prisons. Pennsylvania's greatest need in the premises is a law that would force all State institutions to buy their supplies from the prisons whenever possible.

Splitting of Fees

At the last annual session of the American Medical Association, on recommendation of the Judicial Council, the *Principles of Medical Ethics* of the Association was amended so that Section 3, Article VI, Chapter II, on "Commissions," was made to read as follows:

"SEC. 3. When a patient is referred by one physician to another for consultation or for treatment, whether the physician in charge accompanies the patient or not, it is unethical to give or to receive a commission by whatever term it may be called or under any guise or pretext whatsoever."

The language of this statement is so explicit that it needs no elaboration or elucidation; it attacks directly a specific evasion of the direct statement that fee-splitting shall be unethical by mentioning specifically the nature of that evasion. Moreover, it is broad enough to include any other evasion of the principle that may occur to the agile mind of any commercially minded physician who may wish to evade it. That it will cure the fee-splitter of his practice is perhaps too much to expect, since legislation, and even strict enforcement, have not done away with other evils of the body politic. Where ideals and morals are absent, and where the conscience speaks in a voice so still and small that its possessor seldom hears it, enunciation or principles cannot work a cure. Such statements do serve, however, to bring before the bar of medical opinion those who refuse to abide by them, to permit their divorcement from fellowship in medical organization with their colleagues, and to cast public shame on those who attempt to veil in secrecy practices that are pernicious to the public good.—Editorial, *Jr. A. M. A.*

Wheedlers Foiled

Physicians of Peekskill, N. Y. (population 18,400), published in November a plan for foiling patients who try to wheedle free medical advice over the telephone, according to *Time*. The twenty-five Peekskill doctors, practically all of whom are general practitioners, agreed to charge $1 for every telephone consultation.

One Night Off

The following notice, printed regularly in the town paper by the Shenandoah Medical Society, has been productive of much good and of hearty coöperation by

the citizens of Shenandoah, so that they have permitted the doctors to enjoy themselves in social intercourse one night each year. This happy combination is suggestive for similar application throughout Pennsylvania.

Attention, Medical Patrons

This is to remind you that the Shenandoah Medical Society will celebrate its twenty-fourth anniversary with a banquet tonight. If you need your doctor, page him early, before 9 p. m., and let him have an uninterrupted round of pleasure, just for tonight. We thank you.

Fight to Halt Cancer

Considerable interest has been aroused in insurance circles in England by a suggestion that special insurance policies might assist in checking the spread of cancer. An official in one of the leading British life insurance companies doubted whether many people could be persuaded to take out insurance against cancer alone. If there was a demand for such a policy, periodic health examination certificates showing freedom from cancer would have an important bearing on the premium rate.

Check on Piggeries

The State Department of Health is endeavoring to remove all piggeries that do not conform to its rules and regulations. Complaints against piggeries on the grounds that they are a nuisance have come to the Health Department from Montgomery, Bucks, and Delaware counties. Where violations of rules have been found, the owner was ordered to comply with the regulations. A second inspection was made, and failure to comply with the regulations resulted in the starting of court action to remove the piggeries as public nuisances. The owners, in many instances, have also gone to court seeking injunctions to restrain the Health Department from removing the piggeries and enforcing its regulations. There are twelve such cases now before the Montgomery County courts and forty-eight cases in the courts of Bucks and Delaware Counties. No decision has been rendered by the courts, and an adverse decision for the Health Department will result in the carrying of the cases to a higher court.

Increasing Membership

According to a news item in the *J. A. M. A.*, "every eligible physician in twenty-three counties in the State of Iowa is a member of his local county medical society, and 90 per cent of all eligible physicians in the state belong to their county and state medical societies. There are 3,001 licensed physicians in Iowa." If Iowa can accomplish this result, there is no excuse for the other states not to increase the membership of their component county medical societies. If a physician is not a member of the medical society of the county in which he resides, then he is against organized medicine. If properly conducted concentrated action were centered upon this problem in all counties, satisfactory results would be obtained, the same as in Iowa.

Philadelphia Urged to License Chemical Laboratories

Municipal licensing and medical supervision of the commercial chemical laboratories in the city was demanded December 3d by Dr. Witherow Morse, professor of chemistry at the Jefferson Medical College, who addressed the weekly postgraduate seminar at the Philadelphia County Medical Society. "At the present time," he explained, "any individual can set up his own laboratory for the diagnosis of disease through chemical examination of the blood and urinoscopy. He needs no license, he is subject to no supervision, and it is not necessary for him either to be a physician or to have one for a consultant.

"As a natural result, a great number of such laboratories have sprung up all over the city, many of them run by quacks and inferior men. Reports are handed out which are the result of either ignorance or direct faking, and many individuals are paying for such information and being victimized. The hospitals of Philadelphia are carrying on a large share of this chemical analysis, but their laboratories are crowded with work and it would be impossible for them to shoulder the entire burden. What is needed is for physicians to set up small laboratories in their own offices. The actual work of making a chemical test is purely routine in most instances, and could be conducted by an intelligent nurse or stenographer, so long as she was under the control and supervision of the doctor."

THE TRUE STORY OF ACTEROL

(For additional details see the Mead Johnson announcement in this issue and also watch for special color supplement, *Journal American Medical Association*, January 18.)

Chemists call it by its correct chemical name, *solution activated ergosterol*—the name by which Mead Johnson & Company first supplied it. The largest manufacturer of rare sterols in America, early having activated cholesterol (1925), being first commercially to produce pure ergosterol and to standardize activated ergosterol (October, 1927), seeking to protect themselves and the medical profession against substitution, Mead Johnson & Company coined the name *Acterol* —signifying *activated ergosterol.* The Council on Pharmacy and Chemistry subsequently coined a name, *Viosterol.* As servants of the American medical profession, this company cheerfully defers to its wishes and now calls its product Mead's Viosterol in Oil, 100 D. The product remains the same; only the name is changed.

MEDICOLEGAL NOTES

Practice of Physicians Licensed in Other States as Allowed by Oregon Statute.—The Oregon Supreme Court holds, State v. Smith, 273 Pac. 343, that Or. Laws 1927, p. 686, 13, 14, prohibiting the practice of medicine without a license, is not in conflict with section 20, article 8 of the state constitution, which provides that: "No law shall be passed granting to any citizen or class of citizens privileges or immunities which upon the same terms shall not equally belong to all citizens," or with article 14, 1, of the Amendments of the United States Constitution, although "the law permits physicians and surgeons from other states who are legally licensed therein, who may be called for an especial case or who may practice medicine or surgery across the line of their own state, who do not maintain an office in Oregon."—*Medical Journal and Record.*

Opinion Evidence and Experiments as to Distance From Which Gunshot Wounds Were Made. —In a prosecution for murder by shooting, a deputy coroner was permitted to testify as to the relative distance from which five revolver shots were fired into the body of the deceased. It was contended that this was error prejudicial to the defendant. The witness examined the wounds critically soon after the shooting. He was an experienced physician and had considerable experience in examining and observing gunshot wounds with a view of determining the manner in which they were inflicted. He testified to his belief that one of

the shots was fired from a distance of one foot, and that the other shots were fired at a "much greater distance." His opinion was based on his view of the wounds and the clothing through which the shots entered, the varying degrees of smoke and powder marks around the places where the shots entered, and the shape of the holes in the clothing and body made by the shots. To the objection that the matter was not provable by expert opinion testimony, the Washington Supreme Court said, State v. Gruger, *272*, Pac. 89, that it might not be a question of technical expert testimony, but the court was of the opinion that the doctor's testimony, under the circumstances, was admissible as opinion evidence tending to show that the shots were fired from varying distances of from one to several feet, which was a material inquiry, particularly in view of the defense of justifiable homicide.

The court also held admissible the testimony of a witness, experienced in the use of firearms, who had made a special study of the effect upon various substances of firing into them at various distances, as to the results of experiments made by him, prior to the trial, of firing the revolver used in the alleged crime, with ammunition which the trial judge was warranted in concluding was similar to that fired into the body of the deceased, into a number of pieces of cloth substantially similar in make and texture to that worn by the deceased, and into pieces of cardboard and wood at various distances from one to six feet, on the ground that the trial judge exercised sound discretion in determining that the conditions were sufficiently similar, in so far as the ammunition and substances fired into were concerned, to make a just comparison of the marks and the holes made with those upon the body and clothing of the deceased.—*Medical Journal and Record.*

Form of Hypothetical Question Within Discretion of Trial Court.—In proceedings for assault with a dangerous weapon, a hypothetical question to a medical witness, whether an attack with a flashlight weighing about two pounds could not have possibly resulted in great bodily injury or even death, was held proper (State v. Linville, Oregon Supreme Court, 273, Pac. 338). The objection to the question was that it was not based upon all the testimony with reference to the flashlight and the injuries. The court said: "It is a matter for expert testimony whether a certain instrument used in a certain way could have caused great bodily damage. The witness was possessed of knowledge not common to the jury. There was no error in over-ruling the objection. A hypothetical question on principle need not include all the facts which the questioner alleges in his case. The form of the hypothetical question and the facts to be embraced therein are matters resting largely in the discretion of the trial court."—*Medical Journal and Record.*

A Gracious Act on the Part of an Insurance Company to a Member of the Philadelphia County Medical Society.—The Physicians' Health Association of America, Omaha, Nebraska, on October 14th, advised a member of the Philadelphia County Medical Society that they had learned his illness began on September 8th, and he had paid the March and June assessments after he had reached the age limit; that the health policy provides for no liability after a member reaches the age of sixty-five, and also that any payments made covering the time after reaching this age will be returned upon demand; that they would be legally justified in returning the amount paid for the March and June assessments and denying any liability; but since his remittance was accepted, even through oversight on their part, that their directors would feel disposed to recognize the claim. Therefore, preliminary claim blanks were enclosed, which were to be properly executed and returned, when the final blanks for making proof of claim would be sent to him. On November 8th, a check for $200 as part payment on account was received, although the action was not requested.

The Question of Professional Secrecy After the Death of the Physician.—Professor Tandler, of Vienna, recently gave a short talk on the records of a physician concerning his clientele, which after the physician's death have fallen into the hands of his heirs. In Austria, it usually happens, in this event, that his patients become scattered among several different physicians. Such a thing as buying or selling a medical practice is practically unknown in that country. The records of a deceased physician might, therefore, fall into bad hands and thus give rise to abuses. Professor Tandler believes that such records should, in accordance with a special legal enactment, be placed in official archives for a period of from ten to fifteen years (possibly under the control of the public-health service of the last scene of the physician's activities), where they could be secured at any time by the newly engaged physician of any patient. After fifteen years, any remaining records should be destroyed. The proposal was endorsed by many, although it may be difficult to secure the needed legislation.—*J. A. M. A.*

A Generous Judge.—The following recommendation relative to medical expert testimony is taken from a statement by Evan A. Evans, Judge of the U. S. Circuit Court of Appeals, printed under the heading, "Recommendations for Reforms in Criminal Procedure," in 24 Ill. Law Review 112, 116 (May) 1929:

"The second weakness in our practice deals with the use or abuse of expert witnesses. I am now addressing myself to practice in criminal cases. The defense of insanity is much abused. It has been so abused that the truly insane suffer thereby. Doctors are permitted to define mental normalcy to suit themselves, and then allowed to express an opinion that the accused is mentally responsible or irresponsible, as the case requires. It may be doubted if we shall ever be able to handle this expert witness evidence in a manner that will be quite satisfactory. But I propose this change applicable to medical testimony in criminal cases for consideration, viz., that in all criminal cases the medical expert testify without pay, and that the penalty for violating such a provision of the statute be a revocation of the doctor's license. I submit that this change is as necessary for the accused men when insane as it is for the public when a guilty defendant seeks to avoid the consequence of his own crime by temporarily accepting confinement in an insane asylum. Is the suggestion unsound or illogical? The state gives the doctor a license and excludes all the rest of the citizens from practicing medicine. This license is the grant of a valuable privilege. The power to license carries with it the power to license conditionally. The state ought to reserve to itself the right to use those upon whom it confers the favor when public interest requires it. After discussing the matter with numerous reputable physicians, I have yet to find a single one who did not favor the plan."—*American Medical Association Bulletin.*

"Multiple Seizure" Under Federal Food and Drugs Act Justified.—An interesting "release" from the U. S. Department of Agriculture dealing with this

subject has been received, and we regret that lack of space forbids its complete publication. It presents an interview with W. G. Campbell, head of the Food, Drug, and Insecticide Administration. Since a decision upholding the department was handed down August 19, 1929, by the Supreme Court of the District of Columbia, it appears that much perturbation has been evident in the drug trade, many editorial articles have appeared condemning the practice of "multiple seizure," and one organization even passed a strong resolution against the procedure.

Mr. Campbell declares, however, that seizure, either single or multiple in type, is resorted to only in cases of food products containing added poisonous or deleterious ingredients harmful to health, in cases of food products containing filthy or decomposed animal or vegetable substances, in cases of food or drug products so grossly adulterated or misbranded as to constitute a serious imposition on the public, and in cases of deliberate fraud. Minor violations, as a rule, are corrected by notification, and coöperative work with manufacturers to insure pure products constitutes a large portion of the work of enforcement.

A record of all seizures carried out between July 1, 1924, and October 1, 1929, is appended, and describes twenty-six seizures. Among these are the most flagrant misrepresentations, such as a remedy for contagious abortion of cattle consisting of brown sugar and wheat shorts or bran, with traces of compounds of calcium and sulphur; a baby syrup containing morphin which it was recommended that the parent administer regularly morning and evening during dentition; a suppository containing quinin sulphate, zinc sulphate, boric acid, and traces of formaldehyd and carbolic acid, all mixed with cacao fat, and offered as a treatment for despondency, melancholia, hysteria, crying spells, and diseases peculiar to women; ether containing decomposition products; and many others of like nature.

An agitation has been initiated in certain circles, it appears, to revive the Williams bill, or a similar measure, restricting seizure action, except in special cases, to one operation and then only after hearings. This, according to Mr. Campbell, "would have no effect other than to nullify the purpose of the law and to permit a manufacturer desirous of violating its provisions to carry on his illicit operations indefinitely and profit by the long-drawn-out delay which court cases are subjected to in the present crowded conditions of the average court docket."

Druggist Loses Malpractice Action.—In the case of Panciello v. Conwell, the defendant, William T. Conwell, Philadelphia, a druggist who had fraudulently held himself out as a physician, was convicted of malpractice against the plaintiff, and a verdict was rendered awarding damages of $8,000.

Curative Treatment vs. Punishment of Criminals.—The Hon. Joseph M. Proskauer, of the Appellate Division of the Supreme Court of New York, addressed the meeting of the Philadelphia Child Guidance Clinic held November 18th. This jurist for some time has taken a deep and highly informed interest in psychiatry as a practical civilizing force. This was the topic of his discussion. He stressed the uses and possibilities of psychiatry and the general findings of child-guidance clinics as applied to the courts dealing with juvenile delinquents. The judge stated that curative methods rather than punitive ones should be employed to prevent offenders from committing future offenses, and that psychiatry is the best course to pursue in securing the cure of offenders. He is convinced of the futility of punishment as a cure for crime. The function of a court is to determine the innocence or guilt of an offender. Very rarely does it go beyond that. After all, that is the duty of the psychiatrist. Once a man has been judged guilty and sentenced to prison, he is a criminal for the rest of his life. He denounced the reformatory for boys as not being actual reformatories, "but prisons, the only difference being that one is restricted to men of tender years."

INDUSTRIAL MEDICINE

Safeguarding School Equipment.—In the *Industrial Hygiene Bulletin,* New York State, September, 1929, John N. McDowell, safety inspector, writes the following:

It was just about two years ago the New York State Department of Education, through its division of Vocational Education, requested the State Department of Labor, through its Bureau of Industrial Hygiene, to make an inspection of all shop equipment in vocational schools and industrial arts shops in the elementary and secondary schools of the state, in order to determine whether they were being properly safeguarded. Since that time they have inspected over 150 schools located in all parts of the state. These inspections were not prearranged but were made at any convenient time. All the machinery was carefully examined and the hazards explained to the person in charge. In this first inspection they found over 2,000 violations of what they considered the established practice for safeguarding equipment.

After each inspection a letter embodying their recommendations regarding equipment and shop conditions was sent to the superintendent of schools, and a copy forwarded to the State Department of Education. It thus became the duty of both parties to see that the recommendations were carried out. The first inspection, after ample time had been allowed, was followed by a second, in order to learn to what extent the recommendations had been complied with. In about 75 per cent of the cases it was found that this had been done. The safety movement really begins in the school, as the children of today soon grow into the workers of tomorrow.

It may seem odd that shop equipment in schools need to be inspected when a law is already in existence requiring machines to be properly protected. Unfortunately the law applies only to shops and factories in which work is turned out for a profit, and not to any educational institution where shopwork equipment is used for teaching purposes and not for manufacturing.

It is natural to suppose that all shop equipment in schools would be guarded. The following conclusions regarding this matter have been reached. One of the faults lies in the method by which shop equipment for schools is purchased. Machines for schools are usually sold on a competitive basis and this often results in a machine being purchased under the regular price, but without the usual standard guards.

A number of shop instructors fail to realize the importance of having all exposed moving parts of machinery properly guarded. Shop teachers also neglect to provide safe working conditions. These dangerous conditions were not confined to unguarded machinery or unsafe floors but to shafting, pulleys, and even lack of first-aid kits.

Shafting, which came to within six feet of the floor, was dangerous unless encased. This was recommended to be changed. Iron pulleys with pieces broken out were recommended to be removed. In numerous in-

stances, unsafe, broken, or slippery floors were observed and it was advised that these be repaired. Where the floor around woodworking machines was slippery it was recommended to be made slip-proof by installing rubber mats or by pouring hot glue on the floor and dusting it with light sand.

Dust, fumes, or gases constitute a health and a fire hazard. Wherever melting pots were found in which gases or fumes were generated, and wood-working machinery creating wood dust, it was advised that an exhaust system be installed. In schools where automobile work was being carried on and motors operated, deadly carbon monoxid gas is generated. It was suggested in these cases that the carbon monoxid gas be removed by mechanical means. In this connection it was explained to the school authorities that the Bureau of Industrial Hygiene maintains a plant section with competent engineers to advise on blower systems, exhausts, and ventilating devices. Several schools have taken advantage of this aid.

In one shop it was found that an emery-wheel jack had not been provided and the shop teacher had made a spindle to hold the wheel, hooking it up to the wood-turning lathe. The emery wheel usually revolved at a speed of about 2,000 revolutions. Under the changed arrangement the wheel was making at least 10,000 revolutions, which in case of breaking would be dangerous to every one in the school shop. No time was wasted in explaining to the teacher the danger of this practice.

In many instances in visits through school shops, evidence was found of poor housekeeping. The necessity of providing fireproof receptacles to hold oily waste and rags and thus reduce the menace from fire was explained. The school shops may be broadly divided into the following departments—woodworking, machine, electrical, plumbing, automobile, printing, sheet metal, and foundry. Woodworking is the most dangerous. It is essential that all machinery be properly lighted, especially woodworking machinery which operates saws and other woodworking tools at high speed. To prevent eye strain, it was recommended that the working parts of machines be properly lighted by shaded or frosted globes.

In many instances the guards were not properly installed on circular saws; in others, the guard was not automatic and left the saw exposed while in operation. It was recommended that stops be provided so the saw would not come beyond the bench and endanger the operator's fingers or body. Band saws were often found unprotected, at the rear of the table. Fly wheels were not properly guarded. These defects were ordered to be remedied.

In electrical shops the chief danger comes from shocks, and here it was suggested that rubber mats be used on floors by machines generated over 110 volts. The importance of guarding couplings between motors and generators was stressed and also that switch boxes should be properly guarded.

The rules of industrial hygiene were not fully observed in the plumbing shops and the importance of having boys carefully wash their hands after using lead was impressed upon the instructors.

In the school printing shop improper guarding of machines was the chief danger. They stressed the importance of having plated guards for presses and that fly wheels be properly encased. They recommended as highly essential the guarding of all knives in paper cutters, and also that there be a plentiful supply of hot and cold water, towels, and soap for boys engaged in handling lead, and that they be used.

In sheet metal work guarding of machinery was again the prime essential lacking in school shops. They advised that squaring shears be so guarded that at no time could a boy get his hand between the blade and the bed of the machine. Finally, there is the school foundry; the installation of guard rails and the removal of fumes were the protective measures recommended. For all elevated platforms it was advised that a guard rail and toe board be installed. In foundries where metal was melted it was recommended that exhausts be provided to remove fumes.

Summarizing the inspections, they may say that in general two things were undertaken: (1) To provide shop teachers and school authorities with technical information relating to the safeguarding of equipment in the school shops; (2) to discuss with superintendents, principals, and teachers the importance of teaching correct shop practice. In a few years these boys will be found employed in all the industries of the State, and if in the early years of their lives they are taught the proper way to handle tools and machines, as well as the safeguarding of equipment, this knowledge will become indelibly stamped upon their memories, so that when they enter industry it will be applied. The result will be fewer accidents in the industries of their state and a man power that is active, efficient, and careful.

Industrial Accidents and Compensation Costs.—The total of accidents reported to the Bureau of Workmen's Compensation of Pennsylvania, during May, 1929, showed an increase of 3.4 per cent over the number reported during May, 1928. Reports of 180 fatal and 13,677 nonfatal accidents were received at the Bureau during May, 1929, as compared with 360 fatal and 13,041 nonfatal accidents reported during May, 1928, a reduction this year of 180, or 50 per cent in fatal accidents, but an increase of 636, or 4.9 per cent in nonfatal accidents. This large reduction in fatal accidents for May, 1929, is accounted for by the fact that the 194 deaths occurring in the Pickands, Mather and Company mine disaster are included in the fatal total for May, 1928. Without this explanation the comparison is somewhat misleading.

May is the fifth consecutive month in which the 1929 accident total has shown an increase over the corresponding month of the preceding year. At the end of five months of an unparalleled drive for industrial safety, Pennsylvania is faced with the fact that, in spite of this most intensified safety effort, there has been an increase of 8.6 per cent in accidents for the first five months of the year. The Pennsylvania Industrial Safety Campaign for 1929 was indeed timely, for if there has been a marked increase in accidents with interest in industrial safety thoroughly aroused, as it undeniably is, what would have happened had safety activity been allowed to lag?

Each of the three main industrial groups show increase in fatalities for May as compared with April. Sixty-eight fatalities were reported for the general industrial group during May, an increase of 2 over April. Coal mining fatalities numbered 79 in May, an increase of 12. Anthracite mines reported 45 deaths, or 9 more than in April, and bituminous mines reported 34 fatalities, an increase of 3. The transportation and public-utility group showed the largest increase in fatal accidents for May. Twenty-three fatal accidents were reported for this group as compared with 14 in April. Railroads reported 15 deaths in May, the largest number for some months, and an increase of 8 over April.

With the exception of the construction and contract-

ing industry, all other industries included in the general industrial group showed a decreased number of fatal accidents for May. The construction and contracting industry reported 24 deaths in May, or 100-per-cent increase over April. This increase in fatal accidents for the construction industry is largely the result of the seasoned expansion of employment in that industry. The same number of fatalities was reported for the construction industry during May last year.

Compensation awards for the first five months of the year totaled $7,015,455, or an average of $1,403,091 a month. In 1928, compensation awards for the first five months averaged only $1,200,637 a month. This is a 16.9-per-cent increase in 1929.—*Labor and Industry.*

Recent Decisions of the Workmen's Compensation Board of Pennsylvania.—Wert v. Susquehanna Collieries Company: Facial disfigurement. This is one of seven appeals taken by the same employer in each of which it is claimed that no compensation should be allowed for the reason that the employee has returned to the same employment with no loss of earnings due to the injury. The Board held a hearing de novo in each case, had the claimants appear before the Board for inspection of their injuries, and had descriptions of the injuries placed upon the record by the physician of the Board. It was held that compensation for disfigurement is in the same class as other permanent injuries, for which compensation is provided without respect to loss of earning power.

Antonuccio v. State Workmen's Insurance Fund, Harry C. Lacey, employer: Ivy poisoning was held as accidental injury. An award for disability for a period of one week and four days, amounting to twenty-five dollars and bill for medical services twenty-eight dollars, was affirmed.

Milos Stovich v. Hudson Coal Company—causal relation: The testimony was sufficient, if believed, to warrant the finding that claimant was injured by being struck on the shin by a spike. The disability complained of was due to an ulcer, but there was no competent testimony that the ulcer came from the injury.—*Labor and Industry.*

Further Facts on Accidental Falls.—Nearly half of the deaths from falls among Metropolitan industrial policyholders for the three years 1926 to 1928 occurred in the home. One third of the fatal falls on domestic premises were on stairs. Every tenth fatal fall in the home was out of the window. Slipping or falling on floors accounted for one out of every eight falling fatalities in the home. Falling out of bed or falling over chairs each contributed one twentieth of the total mortality from falls in the home. Among women, nearly two thirds of the falls recorded in these three years occurred in the home.

Falls in public places comprised 19 per cent of the total mortality from this cause, and 43 per cent of these deaths in public places arose in the pedestrian use of streets and sidewalks. Among males, 23 per cent of the falls were in public places and among females only 14 per cent.

Risks incidental to employment accounted for 15 per cent of all fatal falls; for 25 per cent of those among males and for less than 1 per cent of the falls among females. Nearly 10 per cent of the falls in industry occurred in building construction, 21 per cent from scaffolds and staging, 9 per cent from ladders, 6 per cent from roofs, 5 per cent from windows, and 4 per cent into holds of ships or on ships.

This information has been compiled and published as an indication of the type of information which will become available when present plans of the National Safety Council and the Section on Vital Statistics of the American Public Health Association for the development of accident statistics in the United States are perfected and applied. The toll of fatal accidents in the United States bids fair to reach 100,000 each year and the identification of the main factors responsible for this high and rising mortality depends in part upon securing data which will tend to identify hazard factors and point to their control. The International List of Causes of Death provides at present no way to determine where hazardous situations exist, nor is there much information available on the particular modes of injury which produce death. It is hoped that registrars of vital statistics for our states and cities will coöperate with the American Public Health Association Committee (Dr. W. Thurber Fales, State Registrar of Vital Statistics, Montgomery, Alabama, Chairman) in considering plans for throwing further light on a serious and growing menace to life in this country.

Industrial Health Conservation.—Conservation of the health of industrial workers is no longer looked upon as an experiment or a fad, but is today recognized by both employers and employees as of the utmost importance. The employee realizes that it means a higher physical tone, less time lost through illness or disability, better working conditions, and a greater income. To the employer it means increased production, lessened labor turnover, a mutual understanding, greater loyalty, and improved morale on the part of employees.

Many industries now include illness as a factor to be reckoned with in their safety work, since they find that a large percentage of accidents are the result of abnormal health conditions. They reason that the greatest single cause of accidents is carelessness, and that the principal causes of carelessness are worry and illness.

Statistical records of disablement of workers show a tremendous loss. Naturally, accident prevention and care first demanded industry's attention. It found that many poisonous substances used and many modern processes carried new elements of danger. It studied the effect of fatigue and its relationship to production, also the relationship of accident frequency to health. It found that illness causes from eight to ten times as much absenteeism as accidents; that wage earners lose an average of six to nine days each year on account of sickness.

During the past fifteen years many industries have established extensive health departments. They have discovered that industrial hygiene or health supervision does not stop at the door of the workshop, but touches home and community interests.

The most important features of industrial hygiene, as now conducted, that aid or contribute to public health are physical examination of all applicants for employment, the removal or correction of remediable defects, the mental and physical "adjustment of the man to his job," the prevention or control of communicable diseases, the establishing of a plant nursing service, instruction in individual health care, the keeping of records and reporting of accidents and illnesses, and coöperating with family physicians, dentists, and local health officials in maintaining health.

The following recommendations are made: (1) The physical examination of all applicants for employment and of workers returning after illness. (2) The periodic reëxamination of all employees; more frequent attention to those who have physical defects

which need following up. (3) The examination of any and all employees who may be indisposed, for the purpose of diagnosis and advice. (4) The examination, upon request, of all employees who may be under the care of an outside physician, for purposes of coöperation. (5) The surgical care, so far as possible, of all company accident cases. (6) General health education by means of literature, posters, bulletins, lectures, etc. (7) Instruction on mouth hygiene and care of teeth. (8) General supervision of plant sanitation, heating, food inspection, etc. (9) Investigation, by nurses, at the homes of all sick persons, and general nursing advice, so far as possible of all such cases.—*Jour. Mich. State Med. Soc.*

Health Hazard of Exposure to Silica Dust in the Granite Industry.—The first study of the United States Public Health Service on the health of workers in dusty trades was reported in 1928, and dealt with the health of workers in a cement plant. The report on the second study, dealing with the health of workers exposed to silica dust in the granite-cutting industry has recently been published.

Public Health Bulletin No. 187 brings out clearly the extent of the hazard under such conditions as existed in the plants studied. It was possible by differentiating occupations on the basis of the amount of dust exposure to determine within broad limits how much dust of the composition studied can be tolerated by workers without serious deleterious effects. The conclusion was reached that a maximum of dust exposure falling somewhere between 10 and 20 million particles per cubic foot of air is a desirable limit for dust containing about 35 per cent free silica in the form of quartz. It was also concluded, on the basis of a study made in other plants having local exhaust ventilation systems, that this limit could be reached by the use of economical and practicable ventilating devices of this character. The recommendation was made that occupational processes in which little dust is produced be segregated in separate rooms of buildings.

Although the limit established was not found to prevent the occurrence of silicosis, there seemed to be no particular liability to pulmonary tuberculosis when the concentration of dust was within this limit.

The study pictured what happens to men working for many years under a dust hazard of the extent described. The salient points are summarized as follows: (a) The long period of service before the liability to tuberculosis becomes manifest (generally 20 years or more); (b) the sharp correlation between length of exposure to the dust and the prevalence of tuberculosis and also the death rate from this disease; (c) the close relation between the extent of dust exposure and the health of the men; (d) the universal occurrence of silicosis among the workers; (e) the large proportion of workers finally succumbing to tuberculosis; (f) the almost invariably fatal form of the disease within a short time after the onset; (g) the different character of silicosis as manifested by x-rays compared with that shown where there is exposure to a dust with a much higher content of free silica; (h) the location of the tuberculous lesion, usually basal, where the disease complicates silicosis; (i) the absence of deaths from silicosis *per se*, tuberculosis apparently always intervening; (j) the failure of workers to recover from their condition upon going into nondusty trades. (k) the high incidence of sickness of a severe nature from causes other than tuberculosis; (l) the rising sickness and mortality rates from tuberculosis caused by longer use of the hand-pneumatic tool; (m) the high death rates at the present time from tuberculosis compared with normal industrial experience.

This investigation paralleled in its method the studies which are being conducted in other dusty trades and included a record of the sickness and mortality occurring among granite cutters for a period of more than two years, complete physical examinations with special reference to the development of tuberculosis, x-rays, sputum analyses and autopsies, together with a careful analysis of the atmospheric dustiness under varying conditions. A study of mortality among such workers, based on death certificates, was also made.

The bulletin is of particular interest because of many excellent x-rays, photomicrographs of the lungs, detailed histories of individual cases, extensive clinical discussions, and detailed analyses of statistical findings.

HOSPITAL ACTIVITIES

The Patient's Record

It must be borne in mind first, last, and all the time that the care of the patient is the sole activity of a hospital, and that the patient's record is an integral part of the care of the patient. So long as the patient is in the hospital, the record is active; when the patient is discharged, it is filed in the record room, where it becomes a permanent record. Its future use is not only as a reference in case of subsequent illness of the patient, but if properly kept during the stay of the patient, the record affords valuable data in the subsequent study of the conditions for which the patient was under treatment. How exasperating it is, for instance, in a desire to make a study of one thousand cases of a given condition, to find that an indefinite number of the records afford little or no information!

Undoubtedly the physician in charge of the patient, free or pay, is primarily responsible for the patient's record. He may delegate this responsibility to an assistant, but even then he should maintain general supervision. Next to the responsibility of the chief comes that of the intern.

All records should be plainly written in ink, and abbreviations reduced to a minimum. The trouble with abbreviations is that the individual making the entry often does not employ the abbreviated form in common usage. Many institutions have abbreviations common to the particular hospital; for instance, P. I. D. for pelvic inflammatory disease, D and E for dilatation and emptying a pregnant uterus, in contradistinction to D and C for dilatation and curettage of the nonpregnant uterus.

When the individual making the entry so writes that the next day he has to hazard a guess, and in addition to poor penmanship employs his own pet forms of abbreviation, one can readily understand the undue length of time required to interpret a record. Much of this can be obviated by proper instruction of the undergraduate medical student at the bedside.

The records should not be too brief, nor too lengthy, and should cover all the essentials. Interns frequently complain that the chief does not read the personal record or the record of the findings on physical examination. Both should be read by the chief in order to show the intern where he is not bringing out the salient points in the history, and to check up and correct the physical examination made by the intern. In so doing the chief is fulfilling only part of his obligation in instructing an intern. At the same time it affords more accurate and efficient records.

If possible, the personal history and physical examina-

tion should be typewritten. An intern who cannot or will not write legibly should be considerate enough to use a typewriter.

When filed, the patient's record is under the control of the record-room attachés, and not procurable for inspection by an applicant who is not entitled to refer to it. The same control does not obtain when the records are on the floors. Under these conditions, attachés of the hospital have easy access to the records, and may obtain information of value to shyster lawyers, lawyers' runners, and adjusters. If the patient were at home, the records would not be available to any and all comers. Surely the patient is entitled to the same protection if hospitalized. Some institutions seem to believe that a patient's record is an open sesame. For social and legal reasons the patients' records on the floors should be properly safeguarded, whether private or ward patients.

How Can the Teaching Value of Postmortem Material Best be Utilized?—In an institution whose postmortem percentage has been routinely low, marked progress has been made in securing an increased number of examinations on the bodies of patients after death. This hospital finds itself in the possession of pathologic material that it desires to utilize in an educational way.

An attempt should be made to have as many interns as possible present at every postmortem examination. The intern in charge of the patient prior to death should be obliged to attend. A register, showing the names of those interns who were in attendance at every autopsy, should be kept in the postmortem room. This is necessary, because most state boards of education and licensure require a certificate of the number of postmortems witnessed by each intern.

A report of the postmortem examination should, of course, find its way to the patient's chart and a copy should be sent to the visiting physician upon whose service the patient was treated. The visiting physician should always be notified when a postmortem examination of one of his former patients is to be held. This may be done by posting in the staff room the postmortems for the day, and by notifying the physicians concerned. It might be wise to keep a record of the staff members who have witnessed autopsies during their term of service.

A clinico-pathological conference is one of the most valuable teaching procedures carried out in the hospital. This is usually held weekly and staff resident physicians are urged, if not required, to attend. The most interesting autopsies of the week are selected for discussion. The clinician describes the ante-mortem aspects of the case, stating his diagnosis and substantiating it with a narration of physical findings and clinical symptoms. A list of the clinical diagnoses may be placed upon the blackboard before the meeting and in a parallel column may be set down the pathological diagnoses. The pathologist is always present to demonstrate the specimens. In the summary that is made by the clinician and the pathologist, an attempt is made to explain errors in diagnosis and to elucidate methods employed in obtaining the correct diagnosis.

The records of the institution may then contain a correct estimate of the skill employed in studying the patient, and interesting and useful pathological data secured. As a result of these conferences, there frequently arises a series of clinico-pathological reports that may do much to elevate the scientific standing of the hospital and to add generally to the knowledge concerning disease.—*Mod. Hosp.*

Who Should Schedule Operations and How Should This Be Done?—Numerous methods for the scheduling of surgical operations are in vogue. This procedure not only involves the actual reservation of an operating room for a definite period, but also the dissemination of information as to the day's schedule. The supervising nurse in the surgical department should be one of the first persons to be informed that an operation on one of the patients under her charge is contemplated. It is she who must make plans for the proper preparation of the patient. She should be given adequate notice on the day prior to an elective operation, so that each detail of her preoperative technic can be carefully carried out. In the case of emergency procedures, it is she who will be able to prevent loss of time by promptly preparing the patient for his journey to the operating room.

When a surgeon has informed his intern that he will undertake some surgical step on the succeeding day, this information should be immediately placed upon the patient's chart. If the ward nurse is not present when rounds are being made, a slip telling her of the contemplated action should immediately be placed in her hands. The surgeon and his intern then proceed to the operating room for the hour decided upon. If there is no room available at this time, the surgical ward supervisor must be notified of the changed hour and date. The operating-room supervisor at the conclusion of her day's work is able to assign, if this has not already been done, the rooms in which the various surgeons will work. It is also necessary to plan for the prompt presence of an anesthetist. Hence, the chief anesthetist must also be informed concerning the plans for the next day. If, as is the case in many cities, a surgical roster informing visiting surgeons as to the operations to be performed in the various urban institutions is published, it is the operating room supervisor's duty to see that the information concerning her hospital's surgical work for the succeeding day is placed in the proper hands.

It is unjust both to the patient and to the hospital for surgeons to be dilatory in scheduling operations. Not only does this practice lead to confusion in the work of the operating suite itself, but it also makes it necessary to carry far into the night the work of preparing patients. It is a wise step to insist upon the meticulous adherence to rules that have been adopted covering the scheduling of operations. Inconvenience to ward and clinical personnel is thus avoided, and the comfort of the patient is enhanced.—*Modern Medicine.*

How Can Contagion Be Prevented in Children's Hospitals?—The inquirer asked whether the parent should be charged for the board of a child caught in a hospital quarantine. One of the most unfortunate situations that can arise in a general hospital is for a ward to be placed under quarantine as a result of the development of some type of contagion in it. This is so, because not only are the beds in that area of no use to the community during the period of quarantine, but also because the patients who are being treated in the ward are detained in the hospital over an indefinite period of time and are subjected as well to the possibility, if not the probability, of contracting a potential serious contagion. Often the development of such conditions within the children's ward appears absolutely unavoidable. Sometimes visitors are believed to be the source of this difficulty. Again a child may be admitted to the hospital while incubating a contagious disease. But the hospital can do much to prevent the exposure of other children to contagious diseases. Particularly

during the fall and winter months the hospital should endeavor to isolate all new admissions for a period of at least ten days, or two weeks preferably. If this cannot be done, and a contagious disease does develop, an auxiliary children's ward may be improvised so that the care of these patients need not be seriously interrupted. Whether the hospital has taken the above precautions or not, when a quarantine becomes necessary, it would seem that parents should not be charged for the board of a child who is detained beyond the period at which he would normally be able to leave the hospital.—*Modern Hospital.*

Should the Pathologist Be Allowed to Perform Clinical Work?—In the hospital from which this question emanated the pathologist has interested himself in the clinical aspect of the study of disease as well as his own specialty. He has evolved a theory in regard to the specificity of a certain microörganism in causing an infectious disease, and desires an opportunity to observe clinically the effects of a serum that he has prepared in his own laboratory. A difference of opinion has arisen as to whether this serum should be administered by the pathologist personally or whether it should be done under the direction of a member of the visiting staff.

The modern trend, it seems, is for the pathologist to be less and less a person who is isolated in a laboratory room, performing all of his work without any approach to the patient. Clinicians, too, are more and more seeking the advice of the pathologist in the study and treatment of disease. As a result, the pathologist is emerging from his seclusion and is becoming transformed from one who merely studies inanimate tissues into an active collaborator at the bedside. To be sure, as in the hospital above mentioned, jealousy sometimes arises when it is suggested that the pathologist be permitted to invade the field of clinical medicine. In one hospital, however, the visiting staff has been generous enough to recommend the assignment of a few beds to a pathologist, who is also an able clinician, in order that he may apply at first hand, his bacteriologic knowledge in the treatment of disease. Breadth of vision is required when such a request comes to the executive committee of a visiting staff. Nevertheless, if it can be proved that lost motion is eliminated by obviating a third person in any specific study, it would seem that the patient's interests could best be served by allowing a qualified pathologist certain clinical privileges. It should not be forgotten that Jenner, Holmes, and Morton, as well as many other investigators, were definitely delayed in proving their theorems because clinical material was not available.—*Modern Hospital.*

Who Should Inscribe Laboratory Reports on the Patient's Chart?—One of the complaints so often heard about the hospital is that there is undue delay in securing information relative to the results of the examination of specimens that have been sent to the laboratory. There are often many reasons for this delay. Sometimes, specimens have been lost in transit to the laboratory. At times, the laboratory itself is at fault. Frequently the examination has been properly made and the report filled out, but through the carelessness of some person, the resulting information never reached the patient's chart. It is commonly the custom for the laboratory to be responsible for the return of these reports to the ward just as it is the duty of the ward to transmit the specimen to the laboratory. The taking of blood for cell counts and for cultures is often left in the hands of a physician assigned to the laboratory. In some hospitals, a technician or clerk not only delivers the report to the ward but also inscribes the report on the chart. This practice, however, is not the rule. If a messenger from the laboratory has delivered report cards to the ward, and has been given a receipt, it is more often the nurse's duty to see that they are properly copied upon the laboratory sheet. Nevertheless, this system has its drawbacks because of faulty spelling or incorrect copying of numerals representing blood counts, hemoglobin estimations, and blood-chemistry studies. It would seem that it is the best practice to require the laboratory to deliver the results of clinical examinations to the hospital ward, and that the nurse place these slips under the clip of the patient's chart. If the intern copies the results of laboratory studies, he perforce must be informed as to the most recent laboratory findings in the patients under his care.—*Modern Hospital.*

PHYSICAL THERAPY

Static Electricity

The use of the static machine, until recently, had diminished considerably. Probably this was largely because of its great bulk, cost, and the fact that it is rather temperamental, refusing to work on damp days or unless properly dried with lye or soda lime.

There has, however, recently been a renewed interest in static electricity; for, despite the difficulties mentioned above, there are certain results which can be accomplished in no other way than by means of static electricity.

Because of the high voltage and low amperage of the static current, it will cause deep, painless, muscular contractions when properly applied. Furthermore, we know of no other way in which deep tissue drainage can be so readily secured as by means of the static wave or static sparks. In surface contusions, the static brush discharge causes ischemia and sedation of the peripheral nerve endings in a most gratifying manner.

To quote the late Frank B. Granger: "The physiological effects of static electricity are both vascular and lymphatic due to the muscular contractions which force, when stasis or congestion is present, the fluid contents of the tissues in the direction of the various outlets. Pain is thus relieved and exudates removed. The capillaries are dilated, restoring a stagnant circulation to normal, thus softening hardened tissues and relieving pressure and pain."

For these reasons, we feel that static electricity will always hold a distinct and important place in physical therapeutics, and we would even venture to say that no hospital physical-therapy department can be considered complete unless it is equipped with a static machine.

Control of Dosage of Ultraviolet.—Ezra Bridge claims that the treatment of morbid conditions by ultraviolet radiation will be more successful when control is more definite. Proper control applies to the environment of the patient, the source of energy, and the susceptibility of the individual to ultraviolet.

He concludes the following: Control of all factors involved in treatment with ultraviolet radiation is essential to dosage control. This control should apply to the equipment producing the radiant energy and to the patient. The fractional method of treatment with doses indicated by the erythema-tolerance gauge aids in determining the dosage of individual patients. The aim should be the production of an erythema that is just

evident at the end of twenty-four hours, and not pigmentation.—*Medical Journal and Record.*

Physical Therapy.—Physical therapy comprises the use of physical, chemical, and other properties of heat, light, water, electricity, massage, and exercise. Until after the War, most doctors in the United States left these useful means of treatment largely to quacks who did so much ignorant mischief that the regular practitioners were obliged to form the American College of Physical Therapy. In November, the College met in Chicago. As usual at such meetings, there were dozens of clinical demonstrations and many talks. The x-ray (in proper hands) eases pain and helps cure boils, carbuncles, cancer, neuritis, and neuralgia (Dr. Roy Fouts, of Omaha). Heat can remove tonsils without surgery, by cutting off their blood supply (Dr. Frederick Louis Wahrer, of Marshalltown, Iowa). Excess fat may be a disease, like appendicitis or measles, and then should not be fought by diet or massaging machines (Dr. Maxmilian Kern, of Chicago). Ultraviolet rays are useful against pernicious anemia and leprosy (Dr. David Israel Macht, of Johns Hopkins), and stimulate mental activity (Dr. Victor Emanuel Levine, of Creighton University School of Medicine, Omaha).

The burden of many addresses was—and Dr. Norman Edwin Titus, of Columbia, repeated it when he was inducted as the College's president—the warning that artificial sun lamps, vibration machines (electrical or mechanical), and all the things which the skilled physical therapist uses, can do more harm than good if they are not controlled and practiced by graduate physicians trained in physical therapy.—*Time.*

Work of a Special Committee on Physiotherapy in the Medical Society of the County of New York.—A special Committee on Physiotherapy was formed to safeguard the interests of public health and to serve as an agent of the medical profession, following the injection of an unwarranted provision into the Medical Practice Act of 1926 of the State of New York, by which a person without a medical degree could receive a diploma as "licensed physiotherapist" and thereby practice physiotherapy. The act states that "a physiotherapist shall not be permitted to administer drugs and to practice medicine except to treat disease under the supervision of a duly licensed physician." Aside from penalties for its violation, no detailed provision was made on the enforcement of the *spirit* of the act.

As expected, the physiotherapy clause of an otherwise excellent medical practice act has caused difficulties from the beginning, and to counteract these the Committee on Physiotherapy had to direct its efforts in several directions.

Following the recommendation of this committee, the Medical Society of the State of New York at its last annual meeting voted to create a state committee on physical therapy to function in coöperation with similar physical-therapy committees to be formed in each county society, and in so doing endorsed the opinion of the committee that the ultimate solution of the problem lies in the proper evaluation and in the practical application of physical therapy by the physician himself.—*Am. Med. Assoc. Bull.*

Uses and Dangers of Light Therapy.—Richard Kavocs discusses light therapy, infra-red or thermal rays, luminous or visible rays, ultraviolet or actinic rays, clinical uses, dangers of light treatment, overdose, improper handling, individual sensitivity, dangers in pathologic conditions, the result of a survey made by the Medical Society of the County of New York, April, 1929, and, how to protect the public. He concludes with the following: Irradiations from generators of ultraviolet rays and other parts of the electromagnetic spectrum form a valuable addition to the modern physician's therapeutic armamentarium. To be of greatest possible benefit to the patient, the application of irradiations must be based on (1) accurate diagnosis of the disease or of the patient's general condition; (2) proper dosage based on the capacity of the particular source of radiation; and (3) experience in judging the beneficial as well as the possible ill effects of radiation. The home use of ultraviolet generators without the observation of these preliminaries is condemned.—*Medical Journal and Record.*

What Lamp Shall I Buy?—Dr. Frank Thomas Woodbury, chairman of the Committee on Phototherapy and Apparatus of the American Electrotherapeutic Association, discusses this question. It is recommended that the first purchase should be an open carbon-arc lamp which can employ pure carbon. If the carbon lamp has a water-cooled attachment for quartz localization, one is equipped for every phototherapeutic eventuality. The type to buy for the office is a lamp that operates on a lighting circuit. He suggests a 200-watt therapeutic carbon-filament lamp with reflector on a goose-neck stand as being very useful in many conditions in which local phototherapy is indicated, as the eyes, sinuses, hand, etc.; also, a Curay lamp with quartz localizer for orificial actinic applications of subinflammatory degree.—*American Medicine.*

Colonic Irrigation Combined with Wave-Current Therapy.—Because it is estimated that eighty per cent of the ailments in persons past middle life are caused by colonic stasis, Frederick H. Morse believes that "colonic irrigation, when properly performed with apparatus suited for the special work, combined with diet suitable for the case at hand, along with other physical measures a physician would adopt, offers a method *par excellence* for restraining further putrefactive processes so detrimental to local nutrition. It must be kept in mind that as age advances and resistance diminishes, malignancy can always be anticipated. The procedure is simple and has been productive of such satisfactory results when used in combination with wave-current stimulation.—*American Medicine.*

Economic Side of Physiotherapy.—The physician who chooses to go into general practice is probably the only professional man who suffers from the economic disadvantage of being unable to select a mode of conduct and activity that will bring him the greatest financial return for his efforts. The fact that he ministers to health, that he is a humane servant of the public, and the high ethics of an honorable profession, lead him to give his services often for nothing, often for a remuneration which stands in no relationship to the investment his knowledge represents or to the cash value to his patient in reduced disability time and earning power.

The best medical service is available to the very rich or the very poor in our hospitals. The type of patients between are not so well off—and, *eo ipso*, neither is the general practitioner, for his patients come, in the main, from this class. The general practitioner, however, has the right and the duty to use any ethical means that will serve him economically to best advantage. The harassed plodder who can hardly take in sufficient fees to keep ahead of the sheriff is less likely to remain abreast of medical progress than is the physician who

realizes the business side to his life and that of his patient, and who earns the income and leisure essential for additional study and reading.

Physical therapy, to our mind, is such an ethical practice builder. In most cases where physical-therapeutic measures are indicated, self-treatment by the patient is impracticable, at least at first. Then the regularity of treatment, through the necessity of office visits, is not without a definite psychologic and therapeutic effect. The relief to be obtained by proper physical-therapeutic measures is generally so prompt and effective that the patient is fully satisfied with the slightly higher cost.

In figuring fees for treatments it is always best to adopt a definite system rather than to charge by rule of thumb. There are several factors to consider: Investment in equipment and time for study, a reasonable allowance for depreciation and upkeep of equipment, office time, assistant's time, and electric current. It is simple to establish a basic rate of charges once the factors are put down in black and white, and it will be found that such a method will establish a fee that seems reasonable to the patient, yet leaves the physician with a substantially improved income.

Men who do electrosurgery in several sessions (as for instance tonsil work, etc.) frequently so arrange their fees as to approximate the charge a reputable surgeon would make for the same type of operation.—Editorial, *American Medicine.*

PUBLIC HEALTH

Periodic Health Examinations.—In November, astute New York physicians initiated a publicity campaign to accomplish three things: To reduce disease in the community, to get themselves more business, to meet the increasing competition of public health, commercial health, and free institutional medical activities. President-elect William Gerry Morgan of the American Medical Association, who went from his office at Washington to Manhattan to address the opening meeting of the movement at the New York Academy of Medicine, certified the campaign as a good example for physicians in other communities. The Secretary of the Interior, Dr. Ray Lyman Wilbur, also approved by letter.

Under auspices of five county medical societies in New York City, campaigners are using meetings, the press, the radio, and school teachers to recommend *that each person in the community be physically examined at least once a year.* Preferably his *personal* physician should do the work. If an institution makes the examination, the personal physician should obtain the information, interpret the findings, and tell the patient that he is healthy, that he should do so-and-so to prevent disease, or to cure affliction.—*Time.*

Gorgas Memorial Institute.—The annual meeting of members of the Corporation and of the Board of Directors of the Gorgas Memorial Institute of Tropical and Preventive Medicine, Inc., was held October 16, 1929, at the Stevens Hotel, Chicago, Illinois. Following is an abstract of the president's report:

HEALTH EDUCATION. Our program has been one of wide scope and has been instrumental in clearing the minds of the public, particularly in smaller communities and rural sections, as to the value of scientific medicine. We have carried on this work in various ways.

Field Campaign. This type of campaign has been so well received by the medical and dental professions and the laity that we have been urged to continue the work. The plan of the Gorgas Health Corps is a partnership between the medical and dental professions and the public, and in this plan are tremendous possibilities of nation-wide health service. It is hoped that a comprehensive program for these groups can be worked out during the coming year. In the meantime we find that they have held organization meetings and have been of aid to their respective communities in attempting to solve community health problems. A questionnaire has been sent out to determine to what extent the Gorgas Memorial has been instrumental in arousing increased interest in the periodic health examination. The result of this survey is expected to confirm the value of this particular type of service, as the first thousand replies indicate an average increase of twenty per cent over last year.

Press Activities. Fifty-five papers have been added during the past year. Physicians, dentists, nurses, dietitians, hygienists, athletic directors, and other health workers and writers have aided us in maintaining this service. Our contract with the United Press was discontinued and in its place we have inaugurated a health service to a group of some forty leading labor papers of the country. This we consider a valuable service as it carried authoritative health information to the working man. In this task we are assisted by the medical directors of large manufacturing plants, railways, and insurance companies.

Gorgas Essay Contests. Through the generosity of Mr. Charles R. Walgreen, of Chicago, we were able to launch our first national essay contest last spring. This contest was participated in by members of junior and senior classes of public high schools in thirty-four states. The subject was "William Crawford Gorgas, His Life and His Work." Many excellent manuscripts were received. On May 23, 1929, President Hoover, at the Executive Offices, awarded the first Charles R. Walgreen Prize of $500 to the national winner, Miss Gertrude Carter Stockard, of Mountainburg, Arkansas, in the presence of a distinguished company of guests. Miss Marguerite Hastings, of Watertown, Massachusetts, winner of the second national prize, received $150 in cash, $20 was awarded to each state winner, and a bronze Gorgas medallion was awarded to local high-school winners. The second national essay contest, which is to include parochial high schools, has just been launched, and was again made possible through Mr. Walgreen's interest. Our subject this year is "The Gorgas Memorial; Its Relation to Better Personal Health and the Periodic Health Examination." Increased cash awards are offered to this year's contestants, and it is planned to honor the national winner with a ceremony similar to that of last year. These essay contests have received the enthusiastic endorsement of school and health officials, as they provide a means for health research by young people of high-school age.

DEPARTMENT OF MOSQUITO CONTROL. During the past year our engineers have continued their surveys for locations and extent of mosquito breeding, and have, at the request of various groups and individuals, outlined requirements under the Gorgas Plan for total permanent extermination of these pests in several communities.

Dr. Herbert C. Clark delivered the report of the director of the Gorgas Memorial Laboratory, saying in part: The following scientific problems are either under investigation or will be undertaken during the coming year: (1) Study of human carriers of malaria

immediately following the treatment of an acute attack of malaria fever. Mosquito-biting experiments during the course of the patient's treatment with quinin, plasmochin, etc. (2) Transfer experiments with monkey and human species of malaria to determine whether the monkey is an animal reservoir for human malaria. (3) Mosquito-biting experiments to test the infectibility of other anophelines than the three commonly incriminated species in our tropics. (4) A study of anopheline flight habits throughout the day and night under various seasoned conditions both in the wild and domestic regions. (5) A study bearing on the number of egg mats that anopheline mosquitoes may deposit. There is some reason to believe that they survive more than one egg batch. (6) Establish mosquito indices of malarial infection on anopheline catches indoors and outdoors, both in wild and domestic regions. (7) Some experiments bearing on possible sand-fly vectors of unexplained fever epidemics that occasionally occur on the Atlantic side of the Canal Zone. (8) Experiments with two species of human ticks as possible carriers of relapsing fever. (9) Experiments with horse flies in connection with equine trypanosomiasis. Our entomologic surveys have shown where the larval stages of two species of horse flies are past. So far as we can learn, this information is entirely new. (10) Southern cattle fever (piroplasmosis) will receive some attention in connection with imported nonimmune dairy stock.

First International Mental Hygiene Congress Announced.—Many subjects are listed on the program of the First International Congress on Mental Hygiene. Practically all aspects of mental hygiene will be covered at the Congress. Details of the program have been worked out by a committee of which Dr. Frankwood E. Williams, medical director of the National Committee for Mental Hygiene, is chairman, collaborating with correspondents in many countries. The Congress will be held in Washington, D. C., May 5 to 10, 1930. President Hoover has accepted the honorary presidency of this Congress. Delegates are expected from more than thirty countries.

The American Psychiatric Association and the American Association for the Study of the Feeble-minded will hold their annual meetings in Washington at the same time as the First International Congress. Hence the largest number of people interested in mental hygiene ever gathered together at one place and time will probably meet in Washington that week.

It is the purpose to have a maximum of discussion and minimum of formal paper-reading. To this end papers at the morning sessions, printed at length in advance of the meetings, will be limited to ten minutes in statement, and discussion will follow. General sessions, designed to appeal widely to laymen, will be held on several evenings.

The Half-Year Motoring Record in Pennsylvania.—The tabulation of motor-car casualties in Pennsylvania by the State Highway Department for the first six months of 1929 shows that 882 persons were killed and 14,596 injured in automobile accidents. To appreciate these figures more fully, the total approximates the entire population of Coatesville or Sunbury, according to the last census. Of the number killed, 507 were pedestrians.

According to this showing, automobile mortality almost equals that of industry, including the extremely hazardous occupation of coal mining. Of course, the record of nonfatal accidents in industry is much worse than the motoring record, totalling 77,535 in the six-months' period, of which 23,515 occurred in the mines

The increased risks incident to motoring are no doubt due to the constantly increasing number of cars on the road; annual additions to the ranks of inexperienced drivers, and a percentage of drivers who carry liability insurance and seem not to care what happens, boasting they are insured; the joy rider, the youth with more occupants on the front seat than permitted by law, yet no officer reprimands him; the driver who pulls out into the opposite lane of traffic to pass a car or cars ahead, ever willing to take a chance, irrespective of the risks; the hazards of growing congestion; the week-end driver, inexperienced, slow as a rule, and dangerous. Then again, on any hill will be found slow cars, driving hundreds back of them into a murderous frame of mind that eventually will make them take chances.

As to reckless driving, it is just as apt to occur at twenty-five miles an hour as at fifty. The man who drives fifteen or twenty miles an hour and refuses to swing over to one side of the road to allow others to pass is as much of a menace and nuisance as the mile-a-minute driver. As a rule, traffic is at its peak on Sundays, and especially on this day and holidays, the police should occupy themselves in drawing the slow drivers aside to let those in a hurry get past.

It is obvious, from discussion and personal observations of most autoists, that the slow driver not only frequently inconveniences his fellows, but at times so complicates highway congestion that wrecks, with deaths, injuries, and property loss result. While we are always ready to abuse drivers of trucks and vans, not infrequently these men will lean out to wave you ahead at corners or on the straightaways when they see the road is clear.

In view of all the contributions to safer operation, motor casualties should not increase in proportion to the number of cars on the road and the mileage covered. To attain the desired end, drivers and police authorities must coöperate, and continued emphasis must be laid on the fact that gain of time in transportation can never compensate for needless injury and loss of life.

The United States Department of Commerce has revealed after a two-year survey of seventy-eight cities, that Philadelphia's death rate from motor accidents is below the average of large cities. Fatalities for each 100,000 population in Philadelphia are 18.8, while the average is 24. The death rate in Camden, N. J., is 31.8 per 100,000. It was pointed out by Camden city officials that the great number of deaths there is due to the fact Camden is the gateway to seashore resorts and the majority of all accident cases on seashore roads are brought to Camden Hospitals.

The death rate per 100,000 for the vicinity of Camden is 64.4, the highest of any general region checked. Kansas City, Kan., has the best average, with a rate of 4.2 for the city and 8.5 for city and vicinity.

The medical profession is primarily interested in this problem from the humanitarian standpoint. Then, too, the physician spends much time on the road, and there is the personal risk to which he and his family are exposed.

Hospitals are very much interested in the motor-accident problem, from the economic standpoint. In the great percentage of cases, the victims, nonresidents of the community, are taken to the nearest hospital, where they frequently are hospitalized for a varying period and leave without paying anything to the hospital. This cause of financial loss is one of the greatest problems for solution facing hospital administrators today.

The medical profession of necessity is intensely interested in motor-car accidents, and should lend every as-

sistance in any endeavor that will help to reduce them to a minimum.

Industrial Ultraviolet Clinics.—Recommendation, based on a three-months' demonstration in a clinic at Sherwood Colliery, England, that similar stations be established on a nation-wide scale for the treatment by artificial sunlight of rickets, certain forms of tuberculosis, rheumatic, skin, and nervous diseases, and anemia, is contained in a recent joint report of the New Health Society and Sunlight League of Great Britain. These organizations comprise both medical and lay members. In recommending the establishment of the clinics, the two organizations suggested that the clinics could be founded in the large industrial centers, either under public control or in connection with large industrial enterprises.

Need for a national demonstration of the benefits of this treatment was recognized, and the committee appointed decided that the mining industry should be selected for the demonstration. The purpose was to show the value of the treatment in connection with industry generally. Arrangements were made with officials of the Sherwood Colliery, and a clinic was established at the pithead. It was equipped with six large quartz-mercury sun-lamps. These lamps were augmented with four heat-producing lamps. The walls were painted white so that the rays falling upon them would be reflected. Three classes of persons were selected for treatment in the clinic. One hundred boys of similar type and age were assembled, and complete health data were compiled. The boys were divided into two groups, fifty being placed under treatment by the mercury lamps and fifty designated as a control group. The second class comprised adult miners, especially those suffering from rheumatic diseases, and the third section was made up of children of poor miners suffering from rickets, skin diseases, and other child ailments. The treatment adopted consisted of two exposures weekly for the most part, although more frequent exposures were given in special cases. The initial exposure was two minutes to the front of the body and two minutes to the back, and the dosage was increased gradually.

At the end of three months the boys of the treatment group and those in the control group were weighed and measured. It was found that the average gain in weight for the treatment group was four pounds, six and a fraction ounces, and that the average increase in height for this group per boy was 0.762 inches. For the control group the average weight increase was two pounds, ten and a fraction ounces, and the average height increase was 0.50 inches. It was thus shown that the average increase in height per boy in the treatment group was nearly double the control group average. Similarly it was shown that the average height increase of the treatment group was fifty per cent greater than the control group average.

Although the opening of the clinic was arranged primarily for demonstration, miners and their wives were invited to undergo treatment, and the results were equally convincing. Healthy men taking treatment for the tonic effect, men who sought treatment while wounds received in accidents healed, and men suffering from sickness all showed improvement. Many mothers came with babies, and reported that not only did the infants benefit but that their own general condition improved as a result of exposure to the rays while holding the children before the lamps.

Toward the end of the three months, about 500 patients were receiving treatment. It was especially interesting to note that successful results were obtained in the case of rheumatic conditions resulting from mine accidents and unhealed wounds. Most of the children attending were suffering from rickets, general debility due to malnutrition, unhygienic conditions, skin diseases, and acute illness. A large percentage of the children benefited, and results were especially satisfactory in impetigo and eczema cases.

The committee reported a conviction that such treatment is of real value to the mining industry and that further demonstrations would show it to be valuable in other industries. Speedy establishment of a number of clinics was suggested, and it was pointed out that this could be done at a small cost.

The committees of the two organizations prefaced their joint report with the observation that modern industry has robbed man of his light and that the mass of Great Britain's population is engaged in manufacture and spends two thirds of its waking hours wholly removed from natural sunlight "which should be as natural to the population as is the fact of the necessity to eat and drink."

Morbidity in Pennsylvania in October, 1929

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Aliquippa	11	1	1	0	1
Allentown	6	2	11	0	16
Altoona	2	2	13	0	1
Ambridge	1	0	0	1	0
Beaver Falls	5	0	7	0	6
Berwick	2	0	0	0	0
Bethlehem	3	0	7	3	9
Braddock	0	0	4	0	0
Bradford	0	1	1	0	2
Bristol	1	1	3	0	1
Butler	0	0	3	0	2
Canonsburg	1	8	1	0	0
Carbondale	5	0	0	0	0
Carlisle	0	0	1	0	0
Carnegie	1	0	0	0	0
Chambersburg	0	0	1	1	5
Charleroi	0	2	0	0	3
Chester	5	0	7	0	0
Coatesville	4	0	3	0	0
Columbia	1	1	0	0	0
Connellsville	2	0	0	0	0
Dickson City	0	0	0	0	0
Donora	1	0	1	1	1
Dubois	0	0	0	1	1
Dunmore	0	0	0	0	0
Duquesne	11	0	18	0	0
Easton	4	1	9	0	0
Erie	5	2	13	5	29
Farrell	0	4	1	0	2
Greensburg	1	0	2	0	0
Harrisburg	2	1	10	0	14
Hazleton	2	0	0	0	12
Homestead	5	0	4	0	0
Jeannette	8	0	1	0	0
Johnstown	1	3	4	0	35
Lancaster	5	1	1	1	46
Lebanon	4	0	0	0	3
McKeesport	9	0	6	0	5
McKees Rocks	5	1	6	0	0
Mahanoy City	1	0	1	0	2
Meadville	0	0	2	0	1

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Monessen	28	0	1	0	0
Mount Carmel	1	0	1	0	0
Nanticoke	0	0	0	0	0
New Castle	1	2	3	3	3
New Kensington	3	0	5	0	0
Norristown	1	0	1	2	6
North Braddock	3	0	5	0	4
Oil City	0	0	4	0	14
Old Forge	0	0	0	0	0
Olyphant	0	0	0	0	0
Philadelphia	110	9	188	22	134
Phoenixville	1	0	0	0	1
Pittsburgh	65	99	87	5	72
Pittston	3	0	0	0	0
Plymouth	2	1	0	0	0
Pottstown	2	0	1	0	0
Pottsville	9	0	0	1	0
Punxsutawney	0	0	0	0	0
Reading	2	2	7	0	25
Scranton	21	2	12	2	9
Shamokin	5	1	0	0	1
Sharon	1	38	1	0	5
Shenandoah	7	0	0	0	0
Steelton	1	0	4	0	1
Sunbury	0	1	2	0	0
Swissvale	1	0	4	0	2
Tamaqua	0	0	0	0	0
Uniontown	1	0	0	2	4
Warren	0	1	2	0	0
Washington	0	0	1	0	0
West Chester	0	4	1	1	0
Wilkes-Barre	13	0	5	1	12
Wilkinsburg	3	0	6	2	1
Williamsport	12	3	1	0	8
York	0	7	1	0	6
Total Urban	410	201	485	54	505
Total Rural	409	784	502	172	806
Total State	819	985	987	226	1,311

Morbidity in Pennsylvania in November, 1929

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Aliquippa	7	0	2	0	3
Allentown	8	4	20	2	12
Altoona	2	3	7	1	0
Ambridge	1	0	1	0	2
Beaver Falls	0	0	1	0	1
Berwick	0	0	0	0	0
Bethlehem	5	1	10	0	17
Braddock	1	0	7	0	5
Bradford	4	1	3	0	8
Bristol	0	2	8	0	3
Butler	0	2	3	0	0
Canonsburg	0	13	0	0	0
Carbondale	16	0	0	0	0
Carlisle	1	2	0	1	2
Carnegie	3	0	0	0	0
Chambersburg	0	0	0	0	5
Charleroi	1	1	1	0	1
Chester	8	0	4	0	2
Coatesville	2	0	2	0	0
Columbia	0	0	1	0	3
Connellsville	0	0	6	0	0
Dickson City	0	0	0	0	0
Donora	2	0	0	0	0
Dubois	0	1	1	0	0
Dunmore	10	0	3	0	1
Duquesne	9	0	29	0	0
Easton	1	2	15	0	5
Erie	4	4	12	1	19
Farrell	1	62	3	2	0
Greensburg	2	0	3	0	0
Harrisburg	3	0	20	0	10
Hazleton	1	3	2	0	2
Homestead	4	0	3	0	0
Jeannette	1	0	1	0	0
Johnstown	4	2	7	0	74
Lancaster	4	1	3	0	51
Lebanon	1	0	0	0	3
McKeesport	10	0	9	0	6
McKees Rocks	2	1	3	0	0
Mahanoy City	0	0	0	0	0
Meadville	1	8	5	0	1
Monessen	34	1	0	0	0
Mount Carmel	1	0	0	0	0
Nanticoke	2	0	4	0	0
New Castle	2	15	1	0	9
New Kensington	1	0	3	0	0
Norristown	1	1	2	0	5
North Braddock	4	0	10	0	3
Oil City	3	1	11	0	15
Old Forge	0	0	0	0	0
Olyphant	0	0	0	0	0
Philadelphia	86	53	263	9	128
Phoenixville	0	1	6	0	5
Pittsburgh	131	70	125	3	45
Pittston	5	1	0	0	0
Plymouth	3	0	1	0	0
Pottstown	1	0	2	0	0
Pottsville	14	0	1	0	0
Punxsutawney	0	0	0	0	5
Reading	10	1	5	0	25
Scranton	8	3	18	0	2
Shamokin	2	0	6	0	1
Sharon	1	471	9	0	1
Shenandoah	3	0	1	0	0
Steelton	0	0	2	0	0
Sunbury	0	0	0	0	0
Swissvale	2	0	1	0	1
Tamaqua	0	0	0	0	0
Uniontown	0	0	3	0	8
Warren	0	0	6	0	0
Washington	0	4	1	0	0
West Chester	0	1	2	1	4
Wilkes-Barre	10	0	9	1	17
Wilkinsburg	6	1	9	1	2
Williamsport	5	3	1	0	15
York	1	2	5	0	6
Total Urban	455	742	702	22	533
Total Rural	414	784	709	84	791
Total State	869	1,526	1,411	106	1,324

TUBERCULOSIS ABSTRACTS

A Review for Physicians

PREPARED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Published through the coöperation of the Pennsylvania Tuberculosis Society and the Medical Society of the State of Pennsylvania

MODERN plans for curbing the spread of tuberculosis consist of a combination of medical and social measures, which aim (a) to prevent infection and (b) to inhibit the development of actual disease once infection has taken place. The technics employed for achieving these aims vary in actual practice according to the viewpoints of the several workers and the peculiar situations of their communities. W. Bolton Tomson, M.D., in a recent book, *Some Methods for the Prevention of Tuberculosis,* describes several outstanding measures employed in European countries which illustrate various emphases on details of method.

France

Professor Grancher realized the possibilities of separating the newborn from its tuberculous mother, and, as the result of his labor, the *Œuvre Grancher,* a society for protecting children against tuberculosis, was established in 1903 and received governmental endorsement two years later. It arranges "for children from three to ten years of age who are not infectious to be placed out in country districts, where they are educated and stay until they are thirteen years of age." Over 2,500 children have been cared for, and during a period of over 17 years only 7 cases of tuberculosis were registered. The average cost per child is about one sixth the cost of healing a tuberculosis patient in a sanatorium.

Another society, the *Placement Familial des Tout-Petits,* deals with children from birth. The newborn baby is isolated temporarily in a *crèche,* or baby ward, for observation, then cared for at a Maternity Clinic for about three years, after which he is boarded out in a peasant family free from tuberculosis. Separation between mother and child is complete, excepting in rare instances where breast feeding seems essential. The mother is induced to give up her baby by kindly persuasion, but the surrender must be complete for a period of not less than two years. Parents may make four visits to the child during the year. The foster parents are supplied with the infant's clothing, a cradle, and a perambulator. They are bound by definite rules to care for the child as specified by the association and to bring the child periodically to the Centre for observation. The 1927 report of this society states that of the 434 children dealt with, there were 19 deaths, only one of which was due to tuberculosis.

In the United States, preventoria provide protection for tuberculous children.

Belgium

The Belgian National League Against Tuberculosis operates on principles similar to those employed in France. It receives financial aid from the government, municipalities, private donations, fetes, etc., and allots grants to its several branches on a per day, per child scale. Out of 3,000 children dealt with, only one has died from tuberculosis. As in France, many of the children placed in foster homes decide to remain in the locality of their adoption on reaching maturity.

Switzerland

In Switzerland, the emphasis is on sanatoria and on preventoria. A federal subsidy helps to finance the plan of placing children in preventoria, and allotments are made to the institutions on a per child, per day basis. The results appear to be not so glowing as those reported from France and Belgium. For example, a study was

made (terminating in 1923) of 323 patients from 3 to 25 years of age who had been inmates of the Sanatorium de Wald at Zurich:

Of 195 cases of mild severity, 8.7% had died.
Of 31 cases of medium severity, 42.0% had died.
Of 97 cases with severe lesions, 85.5% had died.

Deep-rooted tradition, misplaced parental affection, and the absence of compulsory laws are said to make it difficult to secure proper care for children of tuberculous parents before it is too late. Recently, however, most people are realizing the significance of Grancher's principle, and the demand for preventorium care is rapidly increasing.

Norway

A Tuberculosis Act, passed in 1900, makes the notification of all cases compulsory. The doctor in charge is obligated to instruct the patient and to enforce the recommended precautions. If the patient is recalcitrant, he may be sent to a "Home for Consumptives," which is done particularly in cases where children are endangered, though the law does not yet permit the forcible separation of husband from wife. Each town and parish has its Tuberculosis Committee, responsible to a Central Tuberculosis Committee for the whole kingdom. Poor children of tuberculous parents are also placed in homes and institutions, in which case two fifths of the cost is borne by the state, while the county and town in which they live bear the remainder. When the Tuberculosis Act was first enacted, no institution existed for isolating adult cases. The Norwegian Women's Health Association then collected funds and established, in 1903, a "Nursing Home for Tuberculosis" near Oslo, which has been followed by the establishment of 100 similar homes with a total of about 2,000 beds. Also, a special Home was opened for infants of tuberculous families, many of whom are received at birth. This is, in effect, the Grancher system, except that children are institutionalized instead of placed in private homes. Other devices, such as open air schools as we know them, are also in use. At present, an effort is being made to improve housing conditions for, as the author says, the infection may be *minimized by dilution* to those who live in daily contact with an infecting agent.

Sweden

The system in Sweden is essentially like that of Norway. An excellent demonstration was recently completed. It began in 1904 in a poor district of medium size, situated in a remote spot inhabited by a comparatively stationary population and infested with tuberculosis. Surrounding districts of similar type served as controls. The

Model cottages occupied by ex-patients employed by Papworth Industries.

demonstration centered around a building serving as general headquarters, as well as a Cottage Hospital and Children's Home. In the twenty-year period, tuberculosis morbidity was reduced 33% and the mortality 28%, whereas practically no reductions were noted in morbidity or mortality in the control areas.

England

In England, prominence is given to the view that infection may be prevented from developing into serious disease by raising the bodily resistance and by diminishing the strength or sizes of the infecting doses. Tuberculosis village settlements, such as Papworth at Cambridgeshire and Preston Hall at Aylesford, have demonstrated the feasibility of the idea. Papworth, established in 1916, is a colony or village settlement for tuberculosis cases in the arrested or quiescent stage. The underlying idea is voluntary segregation. Training in some trade or craft is given while the colonist is under treatment or medical observation. Remunerative employment is offered, which enables the colonist to earn part of his income, the remainder being provided by the state as a subsidy. The colony provides at all times medical supervision and hospital facilities. Some of the colonists settle down with their families and remain for life. Thus, such a scheme provides medical care, remunerative occupation, and an optimistic atmosphere; the entire family may be supervised and the general public is protected.

In all countries, of course, general measures, such as education of the public, sanitary regulations, the encouragement of better living standards, etc., are not neglected. In the United States, the drastic method of separating children from their families is not acceptable, the development of colonies is in its infancy, and mandatory laws are not popular.

THE MEDICAL SOCIETY
OF THE
STATE OF PENNSYLVANIA

Officers' Department

WALTER F. DONALDSON, M.D.
Secretary
8063 Jenkins Arcade Bldg.,
Pittsburgh, Pa.

THE CONFERENCE OF SECRETARIES

The twenty-fourth Annual Conference of County Society Secretaries was held at the Penn-Harris Hotel, Harrisburg, on Tuesday, December 3, 1929, and was attended by the secretaries of twenty-three component societies, six editors of county society publications who were not also secretaries, President William T. Sharpless, President-elect Ross V. Patterson, Trustees Knowles, Buyers, Bishop, Kech, Brenholtz, Mitchell, Wyant, and Crow, Dr. Harold A. Miller, of Pittsburgh, Editor Frank C. Hammond, Dr. Christian B. Longenecker, and Mr. Franklin M. Crispin, Executive Secretary of the Philadelphia County Medical Society, of Philadelphia, and Dr. George H. Lathrop, of Newark, New Jersey.

The following secretaries and editors were present:

Secretaries: Jay B. F. Wyant, Armstrong County; Boyd B. Snodgrass, Beaver County; W. Wendell Becker, Berks County; Charles F. McBurney, Blair County; Anthony F. Myers, Bucks County; Joseph Scattergood, Chester County; Charles C. Ross, Clarion County; Richard R. Spahr, Cumberland County; Joseph A. Stackhouse, Erie County; John M. Beck, Huntingdon County; Milton M. Rosenberg, Lackawanna County; John D. Boger, Lebanon County; J. Treichler Butz, Lehigh County; Edward W. Bixby, Luzerne County; Walter S. Brenholtz, Lycoming County; Edgar S. Buyers, Montgomery County; John H. Sandel, Montour County; Mark K. Gass, Northumberland County; Henry G. Munson, Philadelphia County; Arthur B. Fleming, Schuylkill County; Hamblen C. Eaton, Warren County; Charles D. Ambrose, Westmoreland County; and Pius A. Noll, York County.

Editors: Walter F. Donaldson, Allegheny County; Richard S. Magee, Blair County; C. Irvin Stiteler, Delaware County; John M. Keichline, Huntingdon County; Lewis T. Buckman, Luzerne County; and Frank C. Parker, Montgomery County.

Following the luncheon, the program as published in the November JOURNAL was carried out, and was considered interesting and profitable by those in attendance. Contributions to the program will be published from time to time in the Secretary's Department.

The first question submitted to the Question Box was by Dr. Anthony F. Myers, Secretary of the Bucks County Medical Society—How should the Secretary's presence impress a medical society meeting?

The reply to this question was prepared by Dr. Joseph J. Meyer, Johnstown, president of the Cambria County Medical Society and secretary of that organization for seven years previous to 1929. Dr. Meyer was unable to be present and his paper, read by Dr. A. B. Fleming, secretary of Schuylkill County Medical Society, follows:

HOW SHOULD A SECRETARY'S PRESENCE IMPRESS A COUNTY MEDICAL SOCIETY MEETING?

The above question has been submitted to the Question Box for answer. Should the presence of the secretary of a medical society impress the medical society's meeting more than the presence of any other member in attendance at the meeting? I firmly believe that it should. The secretary's position is an impressive one, impressive if only considered from the standpoint of the office itself. It is the most important position in the medical society. Presidents come and go, but the secretary should remain in office. The very nature of his work demands permanency. I think it can safely be said, that as the secretary goes, so goes the society. Although the president is of necessity the main executive officer of the organization, his success depends a great deal upon the ability of his secretary.

If we say that the presence of the secretary should impress the meetings of the county medical society, there must be certain characteristics possessed by the secretary to make his presence significant. He should be alert, aggressive, convincing, industrious, effective in his contact with others, and possessed with a fine sense of responsibility. He should have a stable, well-inte-

grated personality, with a good understanding of his own problems, and a common-sense view of reality. By his own action and conduct he should set such an example as will prove an inspiration to the members of his society.

Since one's impressions depend a great deal upon personal relationship, the personality of the secretary is of the utmost importance. A successful secretary should possess a personality which we might connotate as pleasing, agreeable, engaging. A neat personal appearance upon his part gives the impression of efficiency, and incidentally sets a good example. Enthusiasm of the secretary may breed enthusiasm, tact dissolves potential differences, cheerfulness lends encouragement, and courtesy inspires respect. All these traits are indispensable in the making of a good secretary.

In addition to the above traits, a good memory on the part of the secretary is also of exceeding importance. The ability to recognize individuals whom he has previously met, and to call them by name is a valuable asset. We like to be remembered—it is flattering to our vanity. A secretary should endeavor to learn immediately the names of all new members, he should strive to recognize their attendance at subsequent meetings, and to call each new member by name when possible. Such recognition on the part of the secretary puts the newcomer at ease, and encourages social intercourse and recognition on the part of the other members of the organization. The new member will come again if he feels himself recognized and welcomed by the members of the society.

The attitude of the secretary to all members of the society is of vital importance. In order to deal with them effectively, he must enjoy contacts with them. He should be interested not only in his own thoughts and work for the society, but must manifest an interest in the thought and work of the other members of the society. A friendly attitude, as a rule, generates a friendly response. We have seen meetings practically demoralized by the supreme indifference of the secretary. A secretary is able to do much to create confidence in the society and its meetings. He should convince the members that their society is a good one, that it is worth while to come to the meetings, and to instill in them a desire for regularity of attendance. A secretary must be sincere, for sincerity inspires confidence.

Once having obtained a secretary with all or most of the above characteristics, the continuance of the work of the society for a period of years by this same secretary is of vital necessity. Such a secretary, covering the work of the society over a period of years, is able to judge the various reactions of the society. He is a good barometer of attendance, both business and social. He knows whether a given speaker engaged the interest of the society, whether a certain clinic was successful, etc. He knows whether the picnic or dinner of last year went over big, or whether it was a failure. In short, he knows the psychology of his society.

A secretary solicitous for the welfare of his society, working always for its best interest, hopeful for its growth, and secure in his faith in the purposes of that society—such a secretary should by his presence leave a lasting impression upon that society.

COST OF THE ANNUAL SESSION

The rapidly mounting cost of the conduct of our annual session, amounting in 1929 to a net cost approximating $2,500, led to an attempt to analyze the varying reactions of the members who attend the annual sessions to the different features of such meetings. Accordingly, a return post card was mailed recently to 784 members who registered at the Erie session and 216 members who registered in Allentown in 1928, but who did not register at Erie. The post card contained the following:

DEAR DOCTOR:

This card is addressed to you as an attendant upon the annual sessions of the Medical Society of the State of Pennsylvania. As such you are qualified to decide upon the advisability of the continuance or discontinuance of certain features of the sessions, as well as to suggest new attractions. To this end will you please read and return the attached card, striking out the word *Much* or *Little* to indicate your views. It is not necessary for you to sign your reply, but please be frank and prompt.

(Signed) WILLIAM T. SHARPLESS, *President,*
WALTER F. DONALDSON, *Secretary,*
H. W. MITCHELL, *Chairman Board of Trustees,*
C. HOWARD MARCY, *Chairman Scientific Work Committee.*

To the value of the annual sessions of the Medical Society of the State of Pennsylvania the

Technical Exhibit (books, drugs, apparatus) contributes {Much / Little}

Scientific Exhibit (specimens, charts, demonstrations) contributes {Much / Little}

Picture Theater (films of procedure in diagnosis, treatment) contributes {Much / Little}

Scientific Program (papers, symposia, case reports, speakers, clinics) contributes {Much / Little}

Social Events (golf, sightseeing, reunions, smoker, reception) contributes {Much / Little}

A total of 494 cards were returned (about 50%), a remarkable proportion, showing that the

men who attend the annual sessions are in all probability the most alert among our nearly 8,000 members. (A return post card distributed to 7,800 of our members preceding the Erie session brought only 5% of replies.) Replies total as follows:

	Much	*Little*
Technical Exhibit contributes ..	358	136
Scientific Exhibit " ..	368	126
Picture Theater " ..	384	110
Scientific Program " ..	477	17
Social Events " ..	383	111

From the above figures it may be inferred that, exclusive of the scientific program, the other features are about equally attractive to those who attend the meetings, and that three out of every four in attendance would prefer to have them continue.

The most expensive feature is the Scientific Exhibit, the cost of which has increased considerably in recent years.

THE 1929 HONOR ROLL

On December 20th, 1929, the 1930 per-capita assessment of $7.50 had been received at this office for members of nineteen of our component societies; the leaders in collecting their members' dues, as usual, being Secretaries Logan of Elk County, Fleming of Schuylkill County, and Buyers of Montgomery County. The number of members in good standing on December 20, 1927, was 7,722; on December 20, 1928, 7,819; and on December 20, 1929, 7,842.

CONTRIBUTIONS TO MEDICAL BENEVOLENCE FUND

The Committee on Medical Benevolence gratefully acknowledge receipt of the following contributions to the Medical Benevolence Fund:

A Friend (Allegheny County)	$10.00
Woman's Auxiliary Montgomery County Medical Society	5.00
Woman's Auxiliary Northampton County Medical Society	50.00

The contribution from the Montgomery County Woman's Auxiliary was accompanied by a letter from its secretary as follows:

DEAR DOCTOR DONALDSON:

At the meeting of the Woman's Auxiliary to the Medical Society of the State of Pennsylvania, held at Erie, September 30-October 3, 1929, Montgomery County Auxiliary was awarded a prize of a five-dollar gold piece for the county having the largest number of periodic health examinations, and at a subsequent meeting of the Montgomery County Woman's Auxiliary it was voted to present this prize to the Medical Benevolence Fund. It, therefore, gives me great pleasure to enclose you a check for five dollars covering this prize, as a special contribution from Montgomery County.

We congratulate the women of Montgomery County Auxiliary not only upon winning this prize, which was indeed well deserved, but also upon their wisdom in contributing it to so worthy a cause.

CHANGES IN MEMBERSHIP IN COUNTY SOCIETIES

The following changes have been reported to December 14:

ALLEGHENY: *New Members*—William E. Etter, Warrendale; Jacob P. Nill, Ruben Bldg., McKeesport; Bernard A. McAleer, 721 N. Homewood Ave., Meyer H. Tolochko, 1725 Murray Ave., Pittsburgh. *Reinstated Member*—Max Harris, Brownsville. *Removal*—John R. Owens from Pittsburgh to Hudgins, Va. *Deaths*—Edward E. Evans, McKeesport (N. Y. Homeo. Med. Coll., '96), recently, aged 57; Curtis S. Foster, Pittsburgh (Univ. of Pa., '98), November 28, aged 55; B. Stewart Ralston, Pittsburgh (Univ. of Pgh., '89), October 24, aged 63.

BEAVER: *New Member*—Stanton S. Hoechstetter, New Brighton. *Removal*—James L. Whitehill from Woodlawn to Beaver, R. D. 2.

BERKS: *Death*—Daniel N. Bertolette, Reading (Jeff. Med. Coll., '72), November 26, aged 78.

BRADFORD: *New Members*—Philip G. Biddle, Dushore, Carl M. Bradford, Canton, George C. Swope, Mildred (formerly members of Sullivan County Medical Society, now disbanded), John D. McCallum, Canton.

CAMBRIA: *Transfer*—Milton U. McIntyre, Johnstown, from Somerset County Society; George W. Farquhar, Loganton, to Clinton County Society. *Resignation*—Isador Blum, Brooklyn, N. Y.

CARBON: *Transfer*—John L. Bond, Lehighton, from Schuylkill County Society.

CHESTER: *Death*—James Rea Maxwell, Parkesburg (Jeff. Med. Coll., '88), November 30, aged 67.

CLEARFIELD: *Death*—George D. Fussel, Clearfield (Univ. of Pa., '14), November 29, aged 42.

COLUMBIA: *Death*—John C. Wintersteen, Bloomsburg (Jeff. Med. Coll., '86), November 11, aged 67.

DAUPHIN: *New Member*—William E. B. Hall, Harrisburg Hospital, Harrisburg. *Resignation*—Joseph B. Hileman, Harrisburg. *Death*—J. Harvey Miller, Harrisburg (Jeff. Med. Coll., '96), November 23, aged 63.

DELAWARE: *New Members*—Henry Noskow, 43 E. 10th St., Marcus Hook; Walter E. Wentz, 19 W. Baltimore Ave., Media., Arthur M. Largey, 209 N. Chester Pike, Glenolden.

FRANKLIN: *Transfer*—Earl Glotfelty, Waynesboro, from Somerset County Society.

INDIANA: *Resignation*—Arzie D. Gillespie, Wenatchee, Wash.

LACKAWANNA: *Reinstated Member*—F. Whitney Davis, Connell Bldg., Scranton. *Removal*—Ulrich P. Horger from Old Forge to 426 S. Main St., Taylor.

LAWRENCE: *New Member*—Paul Hays Wilson, New Castle.

LUZERNE: *New Members*—George M. Gallagher, 723 Hazle St., Ashley; Benjamin F. Griffith, 41 W. Hoyt St., Kingston; Seth Bachman Kistler, 200 E. State St., Nanticoke; Helen E. McGovern, 239 N. Main St., Joseph M. Harrigan, 133 S. Washington St., Wilkes-Barre. *Removal*—Frank D. Thomas from Wilkes-Barre to 12 S. Walnut St., Kingston.

MERCER: *New Members*—Norman R. Benner, 701 Broadway, Farrell; Irvine G. Milheim, Dollar T. & T. Bldg., Sharon.

MONTGOMERY: *New Members*—Joseph Russo, James J. McShea, Norristown; M. Louise C. Gloeckner, Conshohocken.

MONTOUR: *Resignations*—Adelbert D. Dye, Helmuth, N. Y.; Enoch H. Adams, Memphis, Tenn.

NORTHAMPTON: *Death*—Elmer C. Miller, E. Bangor (Jeff. Med. Coll., '92), recently, aged 61.

NORTHUMBERLAND: *New Members*—Alice S. Bush, 454 Fairmount Ave., Sunbury; William J. Harris, Shamokin; Oscar B. Millard, Mt. Carmel.

PHILADELPHIA: *Reinstated Members*—Albert F. Beck, 6504 Elmwood Ave., Paul A. Bishop, 3421 Race St,. A. David Bubbis, 936 N. 5th St., Arthur E. S. Casey, 4522 Spruce St., Hyman M. Ginsberg, 6042 Carpenter St., Albert F. Moxey, 47 W. Carpenter Lane, Mt. Airy, David S. O'Donnell, 330 N. 52d St., Israel Rothberg, 2001 N. 32d St., W. R. Watson, 2124 Pine St., Philadelphia; J. Howard Smith, 117 Yale Ave., Swarthmore. *Transfer*—Ronald C. Moore, 1530 Locust St., Philadelphia, from Montgomery County Society. *Removal*—E. Burvill Holmes from Narberth to Conshohocken. *Resignation*—Philip A. Sheaff, Philadelphia. *Death*—Raymond L. Sommers, Philadelphia (Jeff. Med. Coll., '17), October 28, aged 38.

SCHUYLKILL: *New Member*—Elizabeth C. O'Hearn, Shenandoah.

TIOGA: *Removal*—Grover A. Meikle from Lawrenceville to Kenmore Hall, 145 E. 23d St., New York City.

VENANGO: *New Member*—F. E. Conglin, 501 Briggs St., Harrisburg.

WASHINGTON: *Removal*—Herbert C. Friedlander from Donora to Washington Trust Bldg., Washington. *Death*—William W. Sprowls, Houston (West. Reserve Med. Coll., '84), November 17, aged 77.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since October 18. Figures in first column indicate county society numbers; second column, State Society numbers:

1929 dues					
Nov.	23	Venango	55	7828	$ 7.50
	29	Philadelphia	2122-2131	7829-7838	75.00
Dec.	10	Lackawanna	232	7839	7.50
		Allegheny	1302	7840	7.50
1930 dues					
Nov.	18	Luzerne	1-2	20-21	15.00
		Schuylkill	1-20	22-41	150.00
		Elk	1-8	42-49	60.00
	19	Northumberland	1-3	50-52	22.50
		Mercer	1-2	53-54	15.00
	22	Delaware	1-2	55-56	15.00
	25	Schuylkill	21-32	57-68	90.00
		Lawrence	1	69	7.50
	29	Elk	9-10	70-71	15.00
Dec.	4	Bradford	1-4	72-75	30.00
	9	Montgomery	1-19	76-94	142.50
		Northumberland	4-5	95-96	15.00
		Lehigh	1-3	97-99	22.50
	10	Dauphin	4-5	100-101	15.00
		Allegheny	30-33	102-105	30.00
	11	Mifflin	1-3	106-108	22.50
Dec.	12	Schuylkill	33-50	109-126	135.00
	13	Elk	11-15	127-131	37.50
		Luzerne	3-7	132-136	37.50
	14	Beaver	1	137	7.50
		Delaware	3	138	7.50

County Society Reports

BERKS—DECEMBER

The Berks County Medical Society met at Medical Hall on Tuesday afternoon, December 10th. President John H. Rorke presided. Sixty-three members and five visitors were present, the largest attendance in two years.

Dr. Richard C. Norris, professor of obstetrics at the Graduate School of Medicine of the University of Pennsylvania, delivered a lecture on "The Modern Technic in the Conduct of Painless Labor."

DR. NORRIS: The medical profession has been criticized for not rushing blindly into the use of anesthesia for the alleviation of labor pains. In the past fifteen years no method has been found which will always anesthetize and never be dangerous. Many drugs have been studied, and some found that may be used as analgesics and anesthetics, but there is some danger to all of them. As time passes, we find more ways to eliminate danger. The term painless labor is a misnomer. Labor pains can be mitigated but never totally dissipated. Safety must be primarily considered.

With the development of sacral anesthesia in general surgery, novocain with adrenalin and normal saline have been introduced into the practice of obstetrics. It has been used by some only to be later discarded. Advances have been made only because certain men skilled in this form of anesthesia have employed this extensively. Local and spinal anesthesia tend to replace general anesthesia in all operative procedures. Spinal anesthesia has been seriously studied. Its chief disadvantage is that such anesthesia is limited to short duration; therefore, it is good only for operative intervention.

Surgeons recognizing the dangers of general anesthesia are experimenting with local anesthesia which is now nearing perfection. For vaginal work, local anesthesia is still in its infancy. It does not relieve suffering but is good in toxemia, eclampsia, and other general systemic conditions.

Nitrous oxid may be used alone or in combination with oxygen in relieving the pain of labor. Fifteen years ago, it was the newest anesthetic in obstetrics. The dangers to the infant in home deliveries make its use advisable only in hospital cases. When the head reaches the vulva, deep anesthesia must be maintained. In later years more oxygen has been administered which makes for greater safety. Nitrous oxid and oxygen anesthesia has been more thoroughly studied and the disadvantages are that transportation is impossible because of present complicated and cumbersome machinery; it necessitates the presence of a skilled anesthetist; and its cost is prohibitive. Its chief advantages are that it is always under control and therefore can be stopped immediately, and that uterine contractions are not diminished by its use.

After ether and chloroform had come into general use in surgery, they were introduced into obstetrical practice, whereas, at first, chloroform was considered the safer of the two. Its use very often produces inertia, muscular relaxation, tissue asphyxia, liver necrosis, visceral changes, and hemorrhage. It is now wholly abandoned, except to dull the sharpest pain by an occasional whiff.

Ether has always been considered less dangerous than chloroform. Prolonged deep etherization produces inertia, relaxation, and asphyxia. Ether analgesia for the first stage is the safest and best when given intermittently. It is always under control this way. The

disadvantages are that it is difficult to maintain the proper local asepsis and that relatives of the patient are often misled to believe that the struggles and screams of ether intoxication are due to pain.

In a primipara of a highly neurotic type anal analgesia cannot be used because the patient is not under control and the analgesic agent will most frequently be expelled. Morphin, chloral, narcofin, scopolamin, and others are used as sedatives. It is dangerous to administer more than a quarter grain of morphin. A good combination is one dose of morphin sulphate gr. 1/6 and repeated doses of chloral gr. x every three or four hours as indicated until the approach of the second stage, or to prepare the patient for rectal anesthesia. Twilight sleep can be used in the first stage, but not in the second. The danger attending the administration of twilight sleep is in the repeated use of scopolamin, which frequently produces uterine inertia, requiring the administration of pituitrin which in turn causes sudden strong uterine contractions, thereby hastening the delivery of the child before the soft parts are properly dilated. Under these circumstances there is the possibility of injury to the child and mother.

Rectal anesthesia is the best analgesic for the latter part of the first stage of both primipara and multipara. It concerns the use of morphin in the safest dosage, ether in the smallest possible quantity, fortified with a synergistic agent, magnesium sulphate, to promote safety and to lessen danger. There is no scientific proof that it helps the action of morphin or ether; the evidence is purely clinical. The reason for the addition of quinin is to fortify the uterus against inertia.

Lately, ethylene chlorid with oxygen has been extensively used in general surgery, and it is now being tried in obstetrics. It is the most delightful and most powerful of all anesthetics and can be administered with a larger proportion of oxygen, which makes it therefore less likely to produce asphyxia. Its chief danger is its highly explosive tendencies. When the dangers of explosion are removed, it can be generally used in surgery and obstetrics for operative work but not for analgesia.

PEARL E. HACKMAN, M.D., *Reporter.*

DELAWARE—NOVEMBER

The November meeting was held at the Elwyn Training School, Elwyn. Dr. E. A. Whitney read a paper on "Mongolian Idiocy," which consisted of a report of studies of fifty such cases by himself, Dr. Mary McD. Shick, and Dr. E. H. Bedrossian, respectively the first and second assistant physicians and consulting ophthalmologists of the school.

Dr. Whitney defined mongolism as a term used in that peculiar type of mental defective which superficially shows certain physical characteristics found in the Mongol race. Mongolian males are usually more frequent than females. In their series, 17 were of American parentage, 11 were Hebrew, 8 German, 7 Irish, 2 English, and one of each of the following parentage: Scotch, Russian, Dutch, French, and Welsh.

The etiology is an unknown factor, but several theories are advanced as to the cause: (1) that it is due to the advanced age of the parents at the time of birth; (2) that the patient is usually the last child of a large family (in this series twelve of the cases studied were the first children); (3) that syphilis is a cause, but probably it has little or no effect on mongolism; (4) that exhaustion of the mother due to frequent pregnancies may be a factor; (5) that shell shock and the mental state of the mother during the first months of pregnancy is etiologic; (6) that heredity is a predisposing factor (in this series there was such a history in twenty-five cases); (7) that amniotic pressure may provide an explanation of mongolism; and (8) that there is an endocrine derangement. The pituitary, thyroid, thymus, and other glands have been suspected, but this is not proved. In this series glandular therapy had no effect. The feeling at Elwyn is that no one theory explains. They mostly support the hereditary and the reversion types.

Physical Characteristics and Pathology of the Mongolian. The most striking characteristic of the mongol is his resemblance to others of the same type. The dwarfism, peculiar features, and short skeleton are due to the shortening of the long bones rather than the trunk. A marked characteristic is the brachycephalic head, with flattening of the occiput and face. The transverse and the anteroposterior diameters are nearly equal in most cases. The face is flattened and broad, the length and breadth being about equal. The nose is short, stubby, often with bridge depressed. The nostrils face forward rather than downward. In this series, twenty-eight cases presented nasal depression. The tongue is large and thick, and presents transverse fissures. The palate is asymmetrical, the dentition being backward. The first set of teeth are not complete until the fourth year. The teeth are irregular, small, and decay readily. The eyes resemble the Mongolian race, with narrow fissures and strabismus which are not usually noted at birth. The squint is usually bilateral and converging. The palpebral fissures are narrow and oblique. The lids present an eruption, and there are lateral nystagmus and photophobia. The hands are soft and flat. The digits are short and thick, and the little fingers are incurved. All joints show a hyperflexibility. Most mongols tend to assume the "tailors' squat" or Buddah position.

Vascular System. Congenital forms are frequent. The extremities are cold and blue, the temperature subnormal, with low blood pressure.

Cerebral and Nervous System. These patients are apathetic, have no paralysis, and convulsions are not any more frequent than in any other children. Epilepsy is not common in these cases. The brain is smaller, reduced in weight, has embryonic convolutions, and vascularization of the pia and the glia is not increased. Dr. Whitney termed these "unfinished children," the cause being heredity. Somatic sensations are blunt, and sex sensations are probably stunted or absent. Muscular hypotonia is usually present, reflex movements slow. Seldom does the mongol walk before the second year, usually the third year. Speech development is usually late, not before the third or fourth year.

Mongolians are docile, tractable, and easily managed. They grimace and are quite affectionate. The condition should be diagnosed in infancy, because these characteristics develop with the development of the child. In the differential diagnosis rickets and cretinism must be ruled out.

Prognosis. Few reach maturity, death usually occurring about the age of five years, of either pneumonia, pulmonary tuberculosis, measles, or acute infections. The prognosis for mental improvement is poor. With institutional training the patients are capable of slight development.

Discussion. Dr. W. Sandy gave a brief outline of the history of the mental-hygiene movement, then enumerated the progress of this movement and its accomplishments: (1) a changed attitude towards mentally ill

patients, (2) stimulation of interest in psychiatry, especially since the war, (3) encouragement of popular interest, (4) improvement of conditions in asylums, (5) sponsoring of mental clinics and child-guidance clinics, and (6) bringing about of better educational facilities in the medical schools.

Dr. Sandy stated that there are 400,000 beds for mental cases in this country, and in the State of Pennsylvania alone there are 25,000 beds occupied. Five thousand patients apply annually to our State institutions, and eight hundred patients remain each year. He estimated that it cost these hospitals $80,000,000 each year, and there is an additional economic loss which is estimated at about $300,000,000 more. He also stated that one out of every twenty patients would die in a mental hospital, and that there were about 30,000 mentally ill patients outside of these institutions. The hopeful thing stressed by the speaker was that the recovery rate now is about 25 per cent. He then proceeded to outline the methods by which the State is promoting mental hygiene: (1) by adopting progressive policies, (2) by fostering favorable legislation, (3) by stimulating activities for prevention, (4) by coördinating treatment, and (5) by promoting research.

The above Dr. Sandy explained by (1) the voluntary commitment act of 1923, (2) the question of parole, which was made more practical, (3) mental examination of prisoners, (4) the mental-health act by which the laws were codified, (5) provision of the best facilities for mental patients, (6) a comprehensive building program, and (7) institutional care for the male defective and delinquent. He concluded by praising the present State administration.

ALBIN R. ROZPLOCH, M.D., *Reporter.*

LUZERNE—SEPTEMBER-OCTOBER-NOVEMBER

A regular meeting was held in the Medical Building, September 4th, and was called to order by President Fischer at 8.30 p. m. There were 45 members and 2 visitors present. Dr. E. I. Wolfe reported for the program committee that the program had been completed for the remainder of the year. Two new members were elected—Dr. Luther S. Luppold and Dr. Lachlan M. Cattanach.

President Fischer brought up the question concerning the State By-Laws, which require that a man be 65 years of age in addition to being an active member in a county society for fifteen years before he is eligible for associate membership in the State Society. Dr. Fischer stated that he felt this by-law should be changed to take care of men in Dr. Danzer's position. It was moved by Dr. Rumbaugh, and the motion was seconded and carried, that the delegates be instructed to take the proper steps to bring this matter before the State Society and try to correct it.

Dr. G. A. Clark spoke concerning the toxin-antitoxin campaign. It was moved by Dr. Meyers, and seconded by Dr. Tischler, that the Society endorse the work done by the toxin-antitoxin committee, and that physicians urge patients to come to the clinics for the toxin-antitoxin when they cannot afford to pay fees to private physicians. Carried.

Dr. Howorth read an instructive paper on "Tanic-Acid Treatment of Burns," which was discussed by Drs. Mengel, Charles Long, and Cattanach, and closed by Dr. Howorth.

At the regular meeting on September 18th, 45 members and 4 visitors were present. Dr. Whitney read resolutions on the death of Dr. J. P. Biehl. It was properly moved, seconded, and carried that these resolutions be accepted. Dr. Mengel reported on the American Medical Association meeting in August. Dr. E. U. Buckman reported the gift of a desk and clock from Mrs. L. H. Taylor and Miss Anna Taylor. It was moved by Dr. Meyers and seconded by Dr. Edwards that the secretary be instructed to convey the appreciation of the Society to Mrs. and Miss Taylor for this gift. Carried.

At the meeting on October 9th, 50 members and 3 visitors were present. Drs. Mengel and Miner reported on the proceedings of the House of Delegates of the State Medical Society meeting in Erie, stating among other things that the resolution to change the State By-Law concerning affiliate membership had been presented during the course of the meeting. Drs. L. T. Buckman, Marsden, M. C. Rumbaugh, and O'Donnell also spoke concerning the work in the various sections. The secretary read a letter from Dr. Baskett inviting the Society to hold a meeting at the hospital at Retreat. A motion was carried that the program committee arrange with Dr. Baskett for a meeting at Retreat on a date separate from the regular meeting dates. Dr. C. Hayden Phillips read an interesting essay on "The Differential Diagnosis of Some of the Anemias of Childhood." This paper was discussed by Drs. O'Donnell, Miner, and J. S. Long.

At the meeting on October 16th, 67 members and 4 visitors were present. Dr. E. I. Wolfe reported for the program committee and also announced that there would be a special meeting at the hospital at Retreat during November, at which there would be a clinic on mental diseases. It was decided that the meeting at Retreat would be held on November 12th at 2 p. m. The secretary read applications for membership from Dr. Rufus N. Bierly of Pittston and Dr. William J. Daw, of Forty-Fort. These were referred to the Board of Censors. The secretary also read a letter from Mrs. Biehl thanking the Society for the copy of the resolutions on the death of Dr. Biehl. Dr. John L. Eckel, professor of neurology, University of Buffalo, gave a very interesting talk on "The Nervous System in Infections and Toxemias." This was discussed by Drs. Jackman, J. P. Janjigian, Daley, R. R. Janjigian, Miner, and Meyers, and the discussion was closed by Dr. Eckel.

At the meeting on November 6th, 81 members and 8 visitors were present. Dr. E. I. Wolfe reported for the program committee that on November 20th Dr. L. L. Rogers and Dr. A. Desjardins would read papers, and also there would be a moving-picture demonstration of how serums are made. The secretary read applications for membership from Dr. Charles M. Gallagher, of Ashley, and Dr. Helen E. McGovern, of Wilkes-Barre. These were referred to the Board of Censors. Drs. William J. Daw and Rufus M. Bierly were elected members of the society. Dr. John A. Kolmer, Philadelphia, read a most interesting paper on "The Present Status of Chemotherapy in the Treatment of Diseases."

A special meeting was held on November 12th at Retreat Mental Hospital, Retreat, Pa. There were about 38 members present and several visitors. The purpose of this meeting was to hold a clinic on mental diseases in conformity with the State Society's program that each county society hold one meeting a year devoted to mental hygiene. The members were first shown through the wards and found the hospital in

excellent condition. Dr. G. T. Baskett read a paper on "Mental and Nervous Diseases" and demonstrated some cases. After the meeting supper was served. A rising vote of thanks was given to Dr. Baskett for the very interesting clinic and the excellent hospitality.

F. T. O'DONNELL, M.D., *Reporter.*

PHILADELPHIA

November 27, 1929

The president, Dr. John A. McGlinn, in the chair.

"Recent Advances in the Physiology of the Alimentary Tract." By JOHN R. MURLIN, PH.D., professor of vital economics, Medical School, University of Rochester, Rochester, N. Y.—The first important contribution made on the gastro-intestinal tract in the United States was that of Beaumont, in 1833, after his study of the stomach of Alexis St. Martin, which was begun in 1829. Osler, in an address on Beaumont in 1902, said that he was devoted to truth without theory or prejudice, and modest in his conclusions. While workers in Europe and this country, before this time, had discovered and identified hydrochloric acid, it was not until 1839 that Wassermann discovered pepsin. The current knowledge of digestion in Beaumont's day was that the stomach is a mill, a fomenting vat, a stewpan, or just a stomach. However, as early as 1792 the statement was made that to arrive at conclusions the interior of the acting stomach must be studied. While Beaumont's observations were incomplete from a chemical viewpoint, he did learn that fats and oils moved slowly in the stomach; and although the movements mystified him, he knew that by alternate contraction of muscles peristalsis occurred, that old and new food was mixed, that portions of the chyme were constantly going into the duodenum, and also that the stomach revolved in the interior of the cavity.

Carlson had the opportunity of observing from 1912 to 1916 a man with an artificial gastric fistula, necessitated by stricture of the esophagus. Unlike Alexis St. Martin, his patient could not swallow, but after chewing his food he injected it into the stomach. Carlson recorded the movements by introducing and distending a balloon. Hunger contractions were demonstrated, and twenty to thirty minutes after eating tonic contractions were seen. Inhibition of contractions occurs when chemicals are introduced into the empty stomach, and alcohol is strongly inhibitory. That these contractions occur as a wave from fundus to pylorus was shown, and since there can be demonstrated a transverse band which completely divides the stomach in two, it would seem that the function of the pylorus is the discharging of food into the duodenum.

What governs the pylorus? It has a peculiar tact in selecting the food for passage. Acid in the duodenum retards evacuation. Intestinal repletion or pressure of the antrum may govern the sphincter. Carbohydrates, proteins, and fats are evacuated at varying rates, and the amount of free acid may control the pylorus. Fat retards the formation of gastric juice.

In 1916 Rehfuss and Hawk developed the retention tube. Studies with it have made the theory of hydrochloric-acid control doubtful. Enterographs have been made with balloons in the duodenum, the pyloric sphincter, and the antrum, and well-coördinated events have been demonstrated, showing a definite relation of constriction, inhibition, and relaxation. When the antrum is relaxed the sphincter is closed and the duodenum is partly contracted. McCann, in studying the acid control, working with seven dogs, drained the duodenum—preventing alkaline regurgitation—and the antrum, and resected the pylorus. Fractional analyses of the stomach contents showed no variation from the preoperative curves with food, hence alkaline regurgitation is not essential. Pavlow found that increased acidity accelerates the rate of digestion, and vice versa.

The functions of the stomach are these: to receive the food, to hold it, to change it chemically and physically, in rhythm, and to pass it along. Too rapid evacuation may be equivalent to too little secretion. Operative procedure so interferes with normal function that, while animal experimentation is not to be condemned, results with it are disappointing. Rehfuss' discovery of fractional analysis was a great one. Digestibility and the absorption rate of foods may thus be studied.

"The Abuse of Tobacco: Resultant Physiologic Disturbances." By BURRILL BERNARD CROHN, M.D., attending physician of Mt. Sinai Hospital, New York City.—That tobacco is a drug with a deleterious, toxic agent is a conceded fact. Nicotin, an alkaloid, and pyridin, phenols, volatile oils, and carbon monoxid (contained in tobacco) all have a harmful action on the physiology. One drop of nicotin intravenously in man is said to be fatal. Our point of view on approaching this subject must be impartial, for much lay literature is tinctured by bias. Nicotin has a toxicologic action analogous to curara, and is one of the most violent poisons known. From 400 to 600 c.c. of carbon monoxid are absorbed daily by users of twenty grams of tobacco. The cerebrospinal nerve centers are paralyzed, and the vagus is stimulated, then paralyzed. Powerful contractions of the stomach occur, and the bowels are evacuated. There is a spastic contraction of the circular muscle fibers. There is a primary stimulation of all the ganglia and synapses of the autonomic nervous system. Nicotin has a sympathicotropic effect, and the adrenalin output is increased. A rise in acid almost invariably occurs when the patient smokes a cigarette during a fractional analysis, and the x-ray evidences a disturbance of motor functions, increased muscle tonus, and spasticity.

Clinical manifestations of excess smoking are increased secretion, spastic motor phenomena in the stomach and gastro-intestinal tract, loss of appetite and weight, heartburn, esophagospasm, epigastric pain, and a syndrome that closely simulates that of peptic ulcer. Cases of nicotin poisoning from smoking are few, considering the numbers indulging, yet the possibility must not be forgotten when symptoms are present. It affects especially those with labile temperament, the high-strung, and those with a thyroid make-up, subject to digestive disturbances. Whether the make-up is the cause or effect cannot be said.

Another moot point is the relation of nicotin to gastric or duodenal ulcer. The pseudo-ulcer syndrome may be a prodrome of ulcer, possibly with tobacco the underlying irritation. A high percentage of ulcer recurrence is caused by excess smoking, though Stevens lists also infection, diet, alcohol, and other factors as well. In summary, there is clinical evidence that smoking causes hyperacidity, heart-burn, constipation or diarrhea, flatulence, and indigestion. There is a small group of susceptibles whose symptoms may simulate peptic ulcer and who are cured by withdrawal of cigarettes.

"The State of Education of the Public in Nutritional Matters." By GORDON J. SAXON, M.D.—Sources of information and their reliability must be considered, for the public is receiving information regarding nutri-

tion from various sources, chief among them advertising. For instance, yeast is advertised as a cure-all, and the sugar manufacturers, alarmed at the suggestion "reach for a Lucky instead of a sweet," are warning the public of the danger of acidosis and telling them that sugar is essential (though its consumption has risen from eight pounds per capita in 1876 to one hundred eighteen in 1929). California fruit growers also are shouting "beware of acidosis," and bran is a cure-all. Caffee hag, known to contain eighty per cent of the usual amount of caffein, is advertised in the *Journal of the American Medical Association* as decaffeinized coffee. Cultists and faddists are often allowed to go unchallenged.

In the old argument of red versus light meat there is no chemical difference, and acid fruits are acid only in the stomach. Meats bear no relation to rheumatism, but, contrary to old tenets, are needed for the infected individual.

The meat packers carried out an experiment whereby two men lived for one year on fats and lean meats without impairment of health. Meat is an essential element of diet. The Eskimo, who is practically carnivorous, never suffers from dental caries and he may eat as much as nine pounds of meat daily. Gout is unknown and there is no quarreling among them.

Compare India, China, and Japan, where rice is the staple. The people are incapable of a hard day's work—they have too little protein. Bird seed, dried fruits, etc., are sold as substitutes for animal protein. F. G. Benedict, working on fasting, found that in thirty-one days, 277 grams of nitrogen were lost—equivalent to 19½ pounds of muscle. If no protein be eaten, there will still be protein ash in the urine, which evidences a tissue loss that is not replaceable by carbohydrates or fats.

Proteins vary, and a variety should be selected. A pioneer in the work on proteins is Dr. Murlin, who has shown that animal proteins are best. Proteins cannot be stored, for were protein sufficient for two days taken at once, the entire ash would appear in the urine in eight hours. Therefore, protein should be eaten for breakfast, and for this purpose eggs are best, since they are quick to prepare and contain also readily assimilated iron and phosphorus and vitamins and proteins rich in molecular and biologic construction.

MARY A. HIPPLE, M.D., *Reporter.*

WASHINGTON—NOVEMBER

The meeting was held in the Washington Hospital, on November 13th, with Dr. L. D. Sargent presiding. Resolutions on the recent deaths of Drs. W. L. Scott, George R. Conger, and Francis A. Hare were read by Dr. G. B. Woods and approved by the society. Two moving-picture reels showing the physiology and pathology of the gastro-intestinal tract of cats, dogs, and rabbits were then shown. Dr. J. F. Donehoo, of Washington, read a paper on "Intestinal Obstruction."

DR. DONEHOO: Intestinal obstruction is always secondary and is of three types—mechanical, paralytic (toxic or nervous), and dynamic. The mechanical type may vary from slight constipation to complete obstruction, and there may be involved one small area or many feet of gut. If obstruction of the blood supply is involved, strangulation and necrosis follow. This also follows complete obstruction from any cause, and, if unrelieved, is fatal. Death never occurs until there is interference with the circulation. Causes of mechanical obstruction are hernia; volvulus; peritoneal bands; acute peritonitis; ulceration with cicatrices, as in tuberculosis and syphilis; intussusception; foreign bodies, such as gall stones, enteroliths, and swallowed articles; neoplasms; and ulceration. The paralytic type may be of nervous origin, due to spinal-cord lesions or injury to the abdomen. It may also be from infection or toxemia, as in peritonitis and pneumonia. Dynamic ileus is chiefly seen in lead poisoning.

The principal symptoms of intestinal obstruction are pain, nausea and vomiting, constipation, abdominal distention, and toxemia. Physical examination should include percussion and auscultation of the abdomen, as well as palpation. Hernia should be looked for, and a rectal examination made because of the possibility of intussusception. The differential diagnosis involves volvulus, hernia, intussusception, appendicitis, and an inflammation of Meckel's diverticulum. Complications are relatively unimportant because the course of the disease is short, but toxemia frequently persists after the actual obstruction is relieved.

Treatment consists of prevention, such as removal of adhesions and neoplasms, as well as diet and regulation of the bowel movement. Operation is indicated for the relief of the obstruction, the evacuation of the intestinal contents, and restoration of the lumen of the gut. The actual method of operation varies with the different causes and with the individual operator. If the area of obstruction can be determined, the abdomen should be opened directly above it. Intestines should be handled with the greatest care. Some advocate never removing them from the abdominal cavity, while others believe they should be carefully removed for a thorough examination. A great deal depends on the skill and judgment of the operator. A good general rule is to operate as early as possible, do as little as possible, and get out of the abdomen as quickly as possible. If the lumen cannot be restored, it is frequently necessary to do either an enterostomy or a colostomy.

Postoperative treatment consists of the administration of large quantities of water or saline solution in any manner possible to relieve dehydration. Stimulants are often necessary. Frequently transfusion will save a life.

C. A. CRUMRINE, M.D., *Reporter.*

The Woman's Auxiliary to the Medical Society of the State of Pennsylvania

MRS. WILDER J. WALKER, *Editor*
546 South Street, Greensburg, Pa.

THE MONTHLY MESSAGE OF THE PRESIDENT

I am delighted to tell you that I have received from Dr. Appel's office his program for public-health work in all sixty-seven counties of the State and that the material has been in the hands of the county presidents since mid-December.

I sincerely hope, now the Christmas rush is over and the children are all back at school and college, that every Auxiliary will set itself seriously to work to study its own particular program and will endeavor to carry it out so far as possible.

No longer can we of the Pennsylvania Auxiliary complain that the only official value set on us is that of magazine agents. We are at last given definite, constructive, important work to do from end to end of the State. We are invited to coöperate with the State health authorities in carefully planned, much needed work. You can be sure that the officers of the State Medical Society and the State Health Department are watching with lynx eyes to see whether or not we measure up to their hopes and expectations. There are, probably, many doubting Thomases among them, and our future position and opportunities for usefulness will depend largely on how we acquit ourselves in our first real job. If we give a good account of ourselves, I have already the assurance of more important work to follow. *Verbum sat Sapienti!* Already I can see you finding yourselves for the chase. "Good hunting!" Let me remind you that all details of this work are in the hands of Mrs. J. Newton Hunsberger, Norristown.

Concerning this health program, don't forget to call on the women's clubs in your vicinity for help. The more women who are interested in properly directed health work, the better for the community. Mark the qualifying phrase, *properly directed*. That is the secret of our strength. We go into this campaign under expert guidance and with explicit directions. If we follow them intelligently and tactfully, we cannot fail.

As a last word, let me remind you of the first step in all Auxiliary work—a call on the chairman of the advisory committee of the medical society of your county to be sure that the county society sanctions your undertaking and will support you.

A Happy New Year to every Auxiliary member, and to all in her family. May all of you live long and prosper!

Faithfully yours,

CORINNE KEEN FREEMAN, *President*.

PRESIDENTIAL PEREGRINATIONS

November 16—Chicago, National Board Meeting.

November 17—Johnstown, Cambria County (conference only).

Altoona, Blair County (conference only).

November 18—Huntingdon, Huntingdon County (conference only).

November 19—Phoenixville, Chester County (Chester Auxiliary Meeting).

November 21—Mauch Chunk, Carbon County (Carbon County Meeting).

December 9—West Chester, Chester County (conference only).

December 10—Allentown, Lehigh County (Lehigh Auxiliary Meeting).

December 11—Bethlehem, Northampton County (Auxiliary Meeting).

Harrisburg, Dauphin County (conference only).

December 12—Huntingdon, Huntingdon County (Auxiliary Meeting).

COUNTY AUXILIARY REPORTS

We wish to welcome most heartily our new auxiliary of Delaware County. The replies to correspondence with the various counties have been very encouraging. May we have interesting news from you as often as possible. We hope to have many of the other counties not yet organized join us this year.

Allegheny.—The regular bi-monthly meeting was held in Hotel Schenley, Tuesday afternoon, November 26th. A musical program was given by Mrs. Gertrude Clark Hartman, soprano, accompanied by Miss Virginia W. McIlvaine.

"Cancer" was the subject of an illustrated lecture given by Dr. A. J. Bruecken. He stressed the fact that if cancer is to be discovered before it has reached the incurable stage people must be educated to know that it is not a disgraceful disease, inherited from some one of tainted blood, but may attack any one. They should also know that any unusual growth is dangerous. Lumps should not be permitted to grow unmolested, and moles, particularly the blue-black mole, should be watched.

The slides with which Dr. Bruecken illustrated his talk were lectures in themselves, and the lesson they taught will not be forgotten.

A social hour ends our afternoons, and coffee and tea were poured by Mrs. James I. Johnston and Mrs. James O. Wallace.

Beaver.—The auxiliary, with twenty-six members present, met in the Penn-Beaver Hotel, Rochester. A luncheon preceded the meeting. The auxiliary voted to attend a district meeting in Pittsburgh sometime in January. Our State president, Mrs. Freeman, will be there. Amendments to the constitution and by-laws were adopted. Mrs. Ira C. Duncan reported the State meeting at Erie. Miss Juliet Wilson reported the meeting of Washington County held at Washington. Mrs. J. C. Sutton reported the annual card party from which a substantial sum was cleared.

The annual election of officers resulted as follows: president, Mrs. L. L. Hunter; vice-presidents, Mrs. M. M. Mackall, Mrs. Thomas W. McCreary, and Mrs. A. S. McKinley; recording secretary, Mrs. Charles B. Forcey; corresponding secretary, Mrs. A. N. Mellot; treasurer, Mrs. Spencer P. Simpson; president-elect, Mrs. N. R. Crumrine; directors, Mrs. J. A. Helfrich, Mrs. John H. Boal, and Mrs. F. H. McCaskey.

A check for $125 was sent to the Beaver County Tuberculosis Sanitorium at Monaca, and a check for $75 was sent to the Passavant Epileptic Home at Rochester. Subscriptions to *Hygeia* were sent to the four hospitals of the county.

Berks.—The yearly report of the auxiliary is as follows: We held five business meetings during the past year; had a membership drive during October, 1928, increasing our membership from twenty-five to forty-six; made a donation of $25 to the Florida Relief Fund in October, 1928; and sent a check for $25 to the

Benevolence Fund, the proceeds from a card party given in November, 1928. In December and January we secured 336 signatures opposing the passage of the Chiropractic Bill.

Twenty per cent of our members have had their periodic health examination. In May, 1929, the members of our auxiliary were entertained by the president at a bridge tea. The ladies assisted the doctors at their annual outing held in July, at which time four new members were secured, bringing our total membership to fifty.

The new officers are as follows: president, Mrs. Irvin H. Hartman; vice-president, Mrs. Leon C. Darrah; treasurer, Mrs. LeRoy W. Frederick; recording secretary, Mrs. Hiester Bucher; corresponding secretary, Mrs. Rufus E. Le Fevre.

Bucks.—The November meeting was held at Doylestown. The following officers were elected for the next two years: president, Mrs. F. G. Cope; vice-president, Mrs. H. D. Webb; secretary-treasurer, Mrs. Charles S. Abbott.

Mrs. Walter J. Freeman was a guest and talked upon the efforts made by the State Auxiliary. Mrs. J. N. Hunsberger, of Norristown, president-elect of the Woman's Auxiliary to the American Medical Association, spoke of the national organization.

Cambria.—The Cambria County Medical Auxiliary held its first meeting of the new year on October 10th. The new officers were installed and a report on the State Society meeting at Erie was given by the delegate. A social hour followed the meeting.

The new officers are: president, Mrs. R. M. Palmer; first vice-president, Mrs. J. J. Meyer; second vice-president, Mrs. J. W. Barr; secretary, Mrs. C. M. Harris; treasurer, Mrs. Arthur Miltenberger.

Chester.—The auxiliary met in the Green Lantern Tea Room, Tuesday afternoon, November 19th. After luncheon, the regular business meeting was held, and interesting reports were made by the various officers and committees. Mrs. William T. Sharpless, wife of the State Society President, reported on the annual meeting at Erie. Her message stressed the many opportunities for a program of constructive work to be done by the county organizations.

The guest speaker was Mrs. Walter J. Freeman; she stressed particularly the furthering of public health and hygiene. A complete program was outlined for future work to be done during the winter months.

Delaware.—At a luncheon held at the Chester Club, Chester, October 29th, at one p. m., the Woman's Auxiliary to the Delaware County Medical Society was organized. The room and tables were prettily decorated; the food was good, and the group pleasant and interested. Twenty-six women were present, twenty being doctors' wives of Delaware County, four women physicians, and two guests.

We were honored in having Mrs. Walter Jackson Freeman, State president, as our guest and speaker, as well as Mrs. George W. Miller, councilor for this district, who took charge of the meeting following the luncheon. Mrs. Miller opened the meeting by giving, in a very interesting manner, a brief history of the Woman's Auxiliary to the Medical Society. She spoke with enthusiasm of Mrs. W. Wayne Babcock's work, and of the very important part she played in the organization of this work in Pennsylvania.

A general discussion followed this résumé, and on motion the auxiliary was organized. Four meetings a year will be held—October, December, February, and April—at the same time and place as those held by the medical society. The following officers were nominated and duly elected: president, Mrs. Richard Owen; vice-president, Mrs. George L. Armitage; secretary, Mrs. E. Arthur Whitney; treasurer, Mrs. George C. Webster.

Mrs. Miller then spoke of the varied and worth while interests of the woman's auxiliary. She talked first, because of its importance and need, of the Medical Benevolence Fund. She next mentioned Mrs. Forcey's project of periodic health examinations. These examinations are important, and in many cases prevent serious illness. Another way in which the physicians' wives may assist the county or community is in the matter of birth registration. Finally, Mrs. Miller urged that we educate ourselves, and that we use the auxiliary to this end by securing speakers to address the meetings along the lines of health.

At this point she introduced our State president, Mrs. Freeman, who spoke to the auxiliary in a very helpful and interesting manner. First, however, Mrs. Freeman inducted Mrs. Owen into office as the first president of the Delaware County Auxiliary. Mrs. Owen responded in an appropriate manner.

Mrs. Freeman said that the auxiliary could educate the general public on questions of private and public health. She further stated that each auxiliary was to be given a definite piece of work to do and that this work was not to be too big or too easy. She suggested that the auxiliary might work through the women's clubs by getting them to present, at an open meeting, one health program a year. She further stated that periodic health examinations might be held in connection with the woman's club in each town. She wisely urged that the auxiliary work with other organizations whenever possible, rather than independently.

Referring to a constitution for the auxiliary, Mrs. Freeman advised that it be very simple and clear, and that the day, hour, and place ot meeting be definitely decided upon. She said that the executive board meetings should be held one week before each stated meeting; that important matters pertaining to the auxiliary should be taken up fully in these meetings and then presented to the members to act upon.

In closing, Mrs. Freeman spoke of her willingness to aid or advise the auxiliary at any time, and most cordially invited the members to meet in her home. She also extended an invitation to visit the Philadelphia Auxiliary. The meeting adjourned at 4.15 p. m.

Fayette.—Our year began with the first fall meeting in October, and we anticipate a most interesting winter of work. The meetings, coincident with those of the medical society, are held on the first Thursday evening of every month from October to June. We welcome members from other Auxiliaries.

Since treasury funds were low and Yuletide just ahead, with many tuberculous children to be provided with a bit of "Merry Christmas," a charity bridge party was given in November. Thanks to the generous coöperation of friends of the Auxiliary, the proceeds of the party will enable us to do a little for those to whom Christmas would mean another day of doing with only the necessaries of a meager existence.

Franklin County.—The auxiliary was entertained November 15th at the home of Mrs. S. Dana Sutliff in Shippensburg. Sixteen members were present. During the business meeting Mrs. A. W. Thrush of Chambersburg and Mrs. A. B. Sollenberger of Waynesboro, in charge of the work of the welfare committee, displayed

one hundred and forty-four garments, which were collected for the Chambersburg and the Waynesboro Hospitals. They will also respond to six of the Christmas letters of the children at the Mont Alto Sanitorium.

The Book Committee, composed of Mrs. L. H. Seaton of Shippensburg and Mrs. P. D. Hoover of Waynesboro, will receive books to be distributed among the children at the Mont Alto Sanatorium.

Lackawanna.—A most interesting report of the activities for the past year is given by the Lackawanna Auxiliary. In October, Mrs. E. L. Kiesel opened her home for a card party, the proceeds of which ($182) were sent to the Medical Benevolence Fund.

A bridge tea was given at the Century Club in December. In February, Dr. F. J. Bishop gave an enlightening talk on the Chiropractic Bill about to come up in the State Legislature. A committee was appointed, which obtained a large number of signatures to the petitions against this Bill. Miss Leslie Wenzel, of the Visiting Nurse Association, gave a very interesting talk in April on the nature of the visiting-nurse service.

In accordance with Mrs. Forcey's request, a committee was appointed to further the plan for detailed physical examinations of members and nonmembers.

A luncheon and bridge were given at the Overbrook Inn in May.

In October, 1929, a charming luncheon was held at the Hotel Casey. Mrs. Freeman, our State president, gave a humorous and interesting talk on the work of the medical auxiliary. The proceeds of the luncheon were for the Medical Benevolence Fund.

Lancaster County.—The November meeting was held at the Hamilton News. Mrs. Walter J. Freeman, State president, was the guest speaker, and nearly all the members were present. Mrs. John Herr, of Landisville, reported on the State Medical Convention which was held at Erie.

The December meeting will be held December 4th, at the home of Mrs. John Herr, Landisville. The entertainment committee has arranged an interesting program, and expects a large attendance.

Lehigh.—The Auxiliary to the Lehigh County Medical Society met at the home of the president, Mrs. W. C. Troxell, and a literary program was enjoyed. Bridge followed, after which refreshments were served.

A joint meeting was held with the County Medical Society in October. Dr. J. Torrance Rugh, orthopedic specialist, gave a very interesting talk illustrated with lantern slides. A dinner party followed.

The November meeting was held on the 12th, at the Hotel Traylor, with our annual luncheon.

Each hospital receives $25 as a donation for Thanksgiving.

Mifflin County.—In September we had dinner in the Carlisle Tea Room followed by bridge. At the November meeting, Mrs. W. Wayne Babcock of Philadelphia, our guest, talked on "The Organization and Reason for a Woman's Auxiliary to the Medical Society." Her talk was greatly appreciated by everyone. At the close of the social hour, refreshments were served by our hostess, Mrs. James G. Koshland.

Montgomery.—The October executive meeting was held at the home of Mrs. H. C. Podall, of Norristown, and was in the form of a luncheon given in honor of Mrs. J. Newton Hunsberger, president-elect of the Woman's Auxiliary to the American Medical Association. Business and pleasure were delightfully combined.

On November 6th the regular meeting of the auxiliary was held at the hospital. Dr. S. Calvin Smith, heart specialist of Philadelphia, gave a very instructive talk on "How's Your Heart?" He stressed the present-day living and the need of slowing down at times in order to give the heart a much-needed rest.

After the meeting the auxiliary entertained the members of the Society at tea.

The auxiliary entertained on November 21st for the benefit of the Medical Benevolence Fund, and were fortunate in having Rear Admiral Dismukes of the Philadelphia Navy Yard for the guest speaker. He is an interesting speaker and told of his experiences during the World War. The account of the torpedoing of his boat was so graphic that his listeners were held speechless.

Miss Bolger gave several humorous readings, followed by a community sing led by Dr. George Miller.

Sixty dollars were realized from the entertainment.

Northampton.—The regular monthly meeting of the auxiliary was held on October 9th, at the Nazareth Inn, Nazareth. Luncheon was served at one o'clock, followed by a brief business meeting presided over by the president, Mrs. Harry F. Leibert, of Bethlehem.

On motion, card parties will be held at the various homes and the money donated to the Medical Society. A novelty sale was an attractive feature at the meeting held November 13th at the Pomfret Club in Easton. The business meeting was followed by a bridge party, with Mrs. Jacob A. Frannfelder and Mrs. Senn G. Beck as the hostesses.

The monthly meeting was held at the Pomfret Club in Easton, November 13th.

A brief business meeting followed luncheon which was served at one p. m. The treasurer reported a balance of $99.10. The annual election of officers will take place at the December meeting in Bethlehem. Fifty dollars were sent to the Benevolence Fund. A sum of about $20 was realized from the novelty sale held at this meeting. Mrs. Tillman invited the members and their friends to a card party to be held at her home on December 3d for the benefit of the Society. The business meeting was followed by a card party, with Mrs. S. A. Krebs and Mrs. J. J. Groner of Easton as hostesses.

Philadelphia.—The auxiliary met in the auditorium of the County Society Building, Tuesday, November 19th, at 2.30 p. m.

Mrs. Wilmer Krusen was unable to be present, but we are grateful that she has recovered and will soon assume the duties of her office. Mrs. W. B. Odenatt presided.

The speakers, members of the Philomusian Club, presented the following program: "City Parks and A Memory of the Flu," Mrs. Walter C. Hancock; "Safe and Sane Fourth," Mrs. George A. Piersol; "The Milk Fund," Mrs. Charles W. Werst; "Well Babies Clinic," Mrs. Walter M. Grayson.

The need of playgrounds, especially in the spring and autumn is receiving much attention from this group of women. It is interesting to know that the idea of a safe and sane Fourth originated with this club. The milk which they are providing daily is doing much for the undernourished child. The work of the Well Babies Clinic is accomplishing results in teaching foreign-born mothers modern methods. Mrs. Frederick W. Fleck, President of the Philomusian Club, poured tea. Mrs.

Myer Solis-Cohen has been appointed to coöperate with the Mayor's Committee and the Civic Club Committee in the matter of clean streets.

Somerset County.—The auxiliary met in the Court House, November 19th, at 1.30 p.m. An interesting letter from our State President, Mrs. Walter J. Freeman, was read. Our delegate, Mrs. George F. Speicher, gave an excellent report of the Erie Convention.

A party will be held early in January, the proceeds of which will be given to the Medical Benevolence Fund. The nominating committee was appointed as follows: Mrs. W. W. Keim, Mrs. H. A. Zimmerman, and Mrs. George G. Grazier. They will present their report at the January meeting.

Miss Clopper, State Welfare Nurse, gave a talk on "Child Welfare Work." A round table discussion followed. Mrs. W. J. Barr of Cambria County was our guest.

We are looking forward with pleasure to having Mrs. Freeman with us at our February meeting.

Washington County.—The November meeting was held in the Nurses' Home of the Washington Hospital.

After a short business meeting, Mrs. Edna McVicker Jacobs, sang a group of solos. Mrs. Charles H. Smith, of Uniontown, former president of the Pennsylvania State Auxiliary, discussed the health program, especially periodic health examinations. She mentioned also our contribution to the Benevolence Fund.

After a second group of solos by Mrs. Jacobs, Mrs. Walter J. Freeman, of Philadelphia, president of the State Auxiliary, gave a delightful and informative discussion of her plans for the year. She said that this organization, composed of ten thousand members, seven hundred of whom are in our own State, is doing a magnificent work in coöperation with the county medical societies. As there were many guests from Fayette, Greene, and Allegheny Counties, we had several splendid suggestions and helps for better work.

The hospitality committee arranged a delightful social hour.

Westmoreland.—The auxiliary held its October 3d meeting at the Elks' Club, Greensburg. The business meeting was preceded by a luncheon, with twenty-nine members present. Nine members represented our auxiliary at the State convention at Erie. Mrs. H. H. Hamman and Mrs. J. F. Trimble gave excellent reports of this meeting. Plans for the first benefit card party were discussed. A committee was appointed to revise the by-laws.

The November meeting was held at the Elks' Club. After luncheon we were addressed by Miss Willa Cunningham, district superintendent of the Red Cross Roll Call, and Dr. Shero. The former spoke on local red-cross work and social service; the latter on international, national, and State red-cross work. Mrs. Hamman, chairman of the benefit card party held October 22d in the Crystal Room of the Penn Albert Hotel, reported a net sum of $215. Our president, Mrs. Thomas St. Clair, gave each member a small silk bag termed "Sunshine Bags." In these bags we are to place a small sum on especially happy days. At the end of the year we will find some use for the sums thus collected. A nominating committee was appointed to prepare a slate for the December meeting. On motion the meeting adjourned. The remainder of the afternoon was spent in sewing and making bandages for the Latrobe Hospital.

The auxiliary held its monthly meeting at the Elks' Club at Greensburg, December 3d, at 6 p.m. The business meeting was preceded by a dinner with twenty-five members present. During the business meeting the revised constitution and by-laws were adopted. Orchid and yellow were adopted as colors for the auxiliary.

Mrs. Barclay, chairman of the nominating committee, submitted the names of the following officers to serve for 1929-1930: president, Mrs. Thomas St. Clair; vice-president, Mrs. W. J. Potts; secretary, Mrs. A. R. Megahan; treasurer, Mrs. U. H. Reidt. The ballot was accepted as submitted.

The members brought gifts for the Mt. Odin Orphanage. Our Christmas bridge party followed the business meeting.

York County.—A meeting of the auxiliary was held in the Professional Building on Thursday evening, November 7th. Twelve members were present. After the meeting, luncheon was served and cards enjoyed by the doctors and ourselves.

MRS. LAWSON ON HYGEIA COMMITTEE

Mrs. E. Kirby Lawson, of Harrisburg, has been appointed on the *Hygeia* Committee of the National Woman's Auxiliary, of which Mrs. A. B. McGlothlan, of St. Joseph, Mo., is chairman. Mrs. Lawson will be in charge of the following states: Pennsylvania, New Jersey, New Hampshire, Virginia, West Virginia, and District of Columbia.

Medical News

Deaths

MRS. ELLEN CARPENTER, widowed mother of Dr. Samuel A. Carpenter, of Glenside; aged 79; December 1.

JAMES R. MAXWELL, M.D., of Parkesburg; Jefferson Medical College, 1888; aged 67; suddenly, December 2.

EDMUND H. KASE, M.D., of Philadelphia; Hahnemann Medical College and Hospital, 1888; aged 64; December 10.

JOHN R. RODGERS, M.D., of Carlisle; Western Reserve University School of Medicine, 1885; aged 69; August 31.

W. W. SPROWLS, M.D., of Houston; Western Reserve University School of Medicine, Cleveland, 1884; aged 77; November 17.

MARCUS E. BALDWIN, M.D., of Pittsburgh; Baltimore Medical College, 1900; aged 62; November 10, of cardiorenal disease.

DANIEL N. BERTOLETTE, M.D., of Reading; Jefferson Medical College, 1872; held rank of captain in U. S. Navy; aged 78; November 26.

CURTIS S. FOSTER, M.D., of Pittsburgh; University of Pennsylvania School of Medicine, 1898; aged 55; November 28, of angina pectoris.

RICHARD K. FLEMING, M.D., of Pittsburgh; Hahnemann Medical College and Hospital, 1882; aged 70; October 22, of chronic myocarditis.

JAMES D. BRITTINGHAM, M.D., of Philadelphia; Medico-Chirurgical College of Philadelphia, 1899; aged 59; December 14, following a heart attack.

CHARLES T. WAGGONER, M.D., of Spartansburg; Hahnemann Medical College and Hospital, Chicago, 1887; aged 73; June 15, of cerebral hemorrhage and diabetes mellitus.

EDWARD E. EVANS, M.D., of McKeesport; New York Homeopathic Medical College and Flower Hospital,

1896; aged 57; October 27, of diabetes mellitus, arteriosclerosis, and coronary occlusion.

MR. P. HENRY UTECH; November 21. Mr. Utech was very active in the affairs of the Pennsylvania Pharmaceutical Association, and was delegate to the annual session of our State Society held at Erie last October.

FRANCIS R. G. SCHILL, M.D., of Johnstown; Jefferson Medical College, 1897; formerly on the medical staff of the Memorial Hospital, and a school director for several years; aged 53; was found dead in his bedroom, November 26.

PHILIP H. MOORE, M.D., of Philadelphia; Jefferson Medical College, 1902; chief of the eye department of the Methodist Episcopal Hospital for twenty years; in charge of six army hospitals in France during the World War; aged 62; December 18.

SAMUEL K. PFALTZGRAFF, M.D., of York; University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, 1886; active in politics and civic affairs; director of Western National Bank; aged 65; November 22, from a heart attack.

SIMON S. KOSER, M.D., of Williamsport; University of Pennsylvania School of Medicine, 1873; studied in Europe for three years a few years after his graduation; maintained a private hospital for many years and was one of Williamsport's pioneer surgeons; aged 77; November 5, suddenly.

BERTHA L. CONNELLY, M.D., who formerly practiced medicine in Philadelphia, but who has lived in Spring City for several years, died in the Woman's Hospital, Philadelphia, December 1, aged 56. She was graduated from the Woman's Medical College, Philadelphia, and was one of the founders of the College Club.

MRS. MARY WESTON ZEIGLER, Philadelphia, widow of Dr. S. Lewis Zeigler; at the Lankenau Hospital, December 3. Mrs. Zeigler left the following bequests: $25,000 to Bucknell University to be used in endowing a hospital for the care of students, professors, and others; to the Presbyterian Hospital, Philadelphia, $5,000; the residuary estate is left in trust for their two children, and in the event they should die without issue, the trust fund is to be used for the establishment of a hospital to be known as the Weston-Zeigler Memorial Eye Hospital.

GEORGE D. FUSSELL, M.D., pathologist at the Clearfield Memorial Hospital, Clearfield, and son of the late Dr. M. Howard Fussell, professor of applied therapeutics at the University of Pennsylvania; University of Pennsylvania School of Medicine, 1914; aged 41; November 30. Death was indirectly due to an injury sustained twenty-three years ago which had been a constant source of trouble to Dr. Fussell. He was associated with his father in the practice of internal medicine for a few years in Philadelphia before going to Clearfield. He was a member of the American Society of Clinical Pathologists.

Births

TO DR. AND MRS. WILLIAM D. STROUD, of Philadelphia, a daughter, December 13.

TO DR. AND MRS. FRANCIS DES. STOKES, of Philadelphia, a son, Philip, December 10.

TO DR. AND MRS. CHARLES A. BEHNEY, of Philadelphia, a son, Charles A. Behney, Jr., November 30.

TO MR. AND MRS. JOSEPH N. EWING, of Valley Forge, a son, Samuel Evans Ewing, 3d, November 27. Mrs. Ewing is the daughter of Dr. and Mrs. Thomas G. Ashton, of Wynnewood.

Engagements

MISS DOROTHY D. HAIN, of Muhlenberg Park, and Dr. J. B. Pearah, of Reading.

MISS RUTH LUCILE PEARSON, of Portville, N. Y., and Dr. Carl A. Karsh, of North East.

MISS BEATRICE LILLIAN NOVACK, daughter of Dr. and Mrs. Harry J. Novack, of Wynnefield, and Mr. Carl P. Lundy.

MISS SYLVIA VAIL WALKER, daughter of Dr. and Mrs. William Pomp Walker, of Bethlehem, and Mr. Jerry Dillon, of New York.

Marriages

MISS BERTHA M. LESSY to Dr. Alexander Sterling, both of Philadelphia, December 18.

MISS HELEN SCOTT CHANCE, daughter of Dr. and Mrs. Burton Chance, to Mr. Alexander Sellers, all of Radnor, November 27.

MRS. BERTHA REARICK to Dr. Harry Hudson, both of Philadelphia, December 12. Dr. and Mrs. Hudson are spending their honeymoon in Bermuda.

MISS BEATRICE MAGDALENA MUTH, of Overbrook, to Dr. Henry Brooks Harvey, son of Dr. Charles H. Harvey, Philadelphia, October 30.

MISS EMMA COOLIDGE PAINTER, of Wayne, to Mr. Donald Stuart Hoffman, son of Dr. and Mrs. Romaine C. Hoffman, of Narberth, January 8.

MISS DOROTHY FRANCES KAUFMAN, daughter of Dr. and Mrs. A. Spencer Kaufman, to Mr. Jacob Charles Goldsmith, all of Philadelphia, November 27.

MISS BEATRICE ROSS OENSLAGER, daughter of Dr. and Mrs. John Oenslager, of Harrisburg, to Mr. Malcolm Greene Chace, Jr., of Providence and New York, December 14.

Miscellaneous

DR. J. M. WAINWRIGHT, of Scranton, is taking a four months' trip to Africa.

DR. IVAN E. FISHER, of Erie, has completed a postgraduate course in obstetrics which he was taking in New York City.

THE FIRST ANNUAL DINNER OF THE Skin and Cancer Hospital, Philadelphia, was given at the Manufacturers' Club, December 19.

DRS. JOHN W. GORDON, G. E. Yeaney, and S. J. Waterworth, all of Clearfield, have recovered from recent illnesses.

DR. L. WEBSTER FOX, of Philadelphia, has been reappointed as a member of the State Council for the Blind by Governor Fisher.

DR. H. M. GRIFFITH, of Conemaugh, who attended the eye clinics at the Royal London Ophthalmic Hospital, arrived home in December.

THE NATIONAL TUBERCULOSIS ASSOCIATION will hold its 1930 annual meeting at the Hotel Peabody, Memphis, Tenn., May 5-8.

DR. DAVID RIESMAN has been elected president of the medical board of the Philadelphia General Hospital to succeed Dr. Herman B. Allyn, who resigned.

DR. WM. H. MAYER, of Pittsburgh, has resigned as chairman of the A. M. A. Committee to coöperate with the Commissioner of Prohibition and the Secretary of the Interior.

DR. FRANCIS H. ADLER, Philadelphia, on November 18, addressed the section on ophthalmology of the New York Academy of Medicine, on "Metabolism of Sugar in the Eye."

DR. WALTER S. CORNELL, of Philadelphia, was elected president of the Philadelphia Public Health Association at its annual meeting, November 26, succeeding Dr. James M. Anders.

DR. DAVID RIESMAN, of Philadelphia, addressed the Atlantic County Medical Society, Atlantic City, N. J., December 13, on "Diseases of the Kidneys—Nephritis and Nephrosis—Their Classification and Treatment."

DR. AND MRS. ALEXANDER STERLING, of Philadelphia, sailed on December 20 for Europe. Dr. Sterling will visit the asthma and hay-fever clinics of Paris, Berlin, Leiden University of Holland, and London.

THE WILL OF DR. SAMUEL K. PFALTZGRAFF, who died suddenly November 25, leaves $10,000 to the dermatologic department of the York Hospital, to be paid after the death of his wife, for whose benefit the bulk of the estate will be held in trust.

THE FOLLOWING PHILADELPHIANS addressed the Bronx County Medical Society, N. Y., November 20: Dr. Henry L. Bockus, "Chronic Duodenal Stasis"; Dr. John B. Carnett, "Abdominal Pain"; and Dr. William Bates, "Demonstration of Pain of Abdominal Parietes."

PHILADELPHIA ESTABLISHED a precedent in hospital cornerstone laying, December 11, by setting the stone for the new $1,500,000 eleven-story building for St. Luke's and Children's Homeopathic Hospital after the edifice already had been completed.

DR. W. H. STONER, who was formerly Director of the Medical Division, Professional Service Department, of E. R. Squibb & Sons, has joined the scientific department of Hoffmann-La Roche, Inc., of Nutley, N. J., where he assumes the duties of medical director.

THE ARRANGEMENT ENTERED UPON some months ago whereby the book, "Philadelphia, World's Medical Center," would be published by private interests, under the auspices and with the approval of the Philadelphia County Medical Society, has been terminated by that society.

DR. JEFFERSON H. CLARK has resigned as medical director of the clinical laboratories of the Temple University School of Medicine, Philadelphia, and has been appointed director of the laboratory of the Philadelphia General Hospital to succeed Dr. Wm. B. Small, who has resigned.

THE CRAWFORD COUNTY MEDICAL SOCIETY was addressed at the October meeting by Dr. Curtis C. Mechling, of Pittsburgh, on "Methods of Dealing with Acute Anorectal Disorders." At the November meeting Dr. C. Howard Marcy, of Pittsburgh, read a paper on "Problems Met With in Pulmonary Tuberculosis."

THE CENTENARY OF THE BIRTH of Dr. S. Weir Mitchell was commemorated at a special meeting of the Philadelphia Psychiatric Society held on December 13. Addresses were delivered by Dr. Charles W. Burr on "S. Weir Mitchell, Physician," and Professor Felix E. Schilling on "S. Weir Mitchell, Poet and Novelist."

A TRUST FUND OF $50,000 for the purchase of radium to be used by all the physicians in Cleveland, Ohio, for the treatment of the sick poor, has been established by an anonymous donor. The gift was announced at the recent annual meeting of the Fifth District of the Ohio State Medical Association.

AT THE ANNUAL MEETING of the National Association of Police and Fire Surgeons and Medical Directors of Civil Service Commissions recently held in Detroit, New York City was chosen for the 1930 convention. Dr. Harry Marcher of the New York Fire Department was elected president, and Dr. Arthur Wildman of New York City, secretary.

THE 59TH ANNUAL MEETING of the American Public Health Association will be held in Fort Worth, Texas, during the week of October 27, 1930, with the Hotel Texas as headquarters. Detailed programs will be announced in the official publication of the Association —*the American Journal of Public Health* and the *Nation's Health.*

A GIFT OF $10,000,000, to be expended through a philanthropic foundation and to be used in the interest of public welfare, has been donated by a Pittsburgh capitalist and philanthropist. It is to be known as the Maurice and Lura Falk Foundation, established as a memorial to Mrs. Falk, and will begin operating next year.

PATIENTS MAY NOW BE TRANSPORTED by aeroplane to and from New York City, Springfield, Mass., Philadelphia, Pittsburgh, St. Petersburg, Fla., Oklahoma City, St. Louis, Indianapolis, Chicago, Buffalo, Boston, Birmingham, and Atlanta. The service will function day and night wherever there is a suitable landing place.

AT THE MEETING of the section on ophthalmology of the College of Physicians of Philadelphia, held December 18, the following were guest speakers: Dr. Chas. A. Young, Roanoke, Va., "A Case Exhibiting Active Circulation in the Posterior Part of the Lens," and Dr. Ben Witt Key, New York City, "Do Corneal Scars Move? A Preliminary Report of a Clinical and Biochemical Study."

IMPORTANT EUROPEAN CONGRESSES to be held in 1930 and 1931, according to *Medical Journal and Record,* include the second Pan-Russian Congress of Microbiologists at Moscow, December 27-30; the International Congress on Pediatrics, Stockholm, August 17-20, 1930; and the ninth Interallied Congress of Accoucheurs and Gynecologists at Moscow in May, 1931.

THE COMMONWEALTH FUND has appropriated $5,000 for carrying on a study of normals by Dr. Theodore H. Weisenburg, at the Graduate School of Medicine of the University of Pennsylvania in an attempt to determine the basis for drawing a line between normal and pathologic conditions in speech, sensory, and motor activities in children as a guide in clinical diagnosis.

PROFESSORS OF ANATOMY in seven of the leading medical departments of American universities are collaborating in a study of methods whereby anatomical research during the past hundred years may be graphically represented at the Chicago Century of Progress celebration in 1933. The universities represented are those of Chicago, Minnesota, Illinois, Michigan, Northwestern, Cornell, and Johns Hopkins.

THE RADIOLOGICAL SOCIETY OF NORTH AMERICA, organized in 1912, held its annual session in Toronto, Canada, December 2-6. At the annual dinner held on December 5, the new president, Dr. Robert J. May, of the Cleveland General Hospital, was installed. Dr. Joseph Colt Bloodgood, Baltimore, Md., Dr. Russell L. Haden, Kansas City, Kansas, Madame Curie, Paris, France, and Dr. Maud Slye, Chicago, Ill., were the recipients of the Society's gold medal.

FOR CHARITY'S SAKE, staid society women, who seldom if ever see back of a counter, gave their services for one day, November 30, to a department store in Rochester, N. Y., to benefit the General Hospital's $600,000 building fund. Five per cent of the total sales of the day will be given to the hospital fund. The store remained open for the first time in its history until 9.30 p.m., so that the workers might reach a large number of their friends.

AT THE ANNUAL MEETING of the Greater Philadelphia Chapter, Military Order of the World War, held November 25, Dr. (Colonel) Clarence P. Franklin was elected commander for the coming year. (Dr. (Colonel) Theodore Le Boutillier was elected a member of the general staff, and Dr. (Brigadier General) George E. de Schweinitz was elected a member of the advisory staff. Army Day, originated and sponsored by the Military Order of the World War, will be celebrated April 5.

AT THE STATED MEETING of the Eastern Pennsylvania Chapter of the Society of American Bacteriologists, held at the Univeristy of Pennsylvania

Laboratory of Hygiene, November 26, Dr. S. A. Waxman delivered an address on "Microörganisms Concerned in the Decomposition of Celluloses in Nature," and Dr. R. L. Starkey, "Some Influences of Higher Plants upon Organisms." Drs. Waxman and Starkey are associated with the State of New Jersey Agricultural Experiment Station, New Brunswick, N. J.

FOLLOWING A SURVEY British experts have announced that the cancer germ is a parasite. This statement is based upon evidence brought forward by the Westmoreland Field Commission for Cancer Research that cancer is caused by a specific germ which attacks animals and human beings indiscriminately. The report shows that certain villages in Westmoreland County, England, are free from cancer, while others suffer heavily, the variation being true even as to streets and single houses in the same community.

METHODS OF COMBATING the steady increase in mental and nervous diseases in New Jersey were announced, November 8, by the State Department of Institutions and Agencies, as the result of a recent conference held by representatives of the State Medical Society and the Mental Hygiene Committee of the State Board of Control. The spreading of knowledge of the principles of mental hygiene and the importance of early recognition of nervous and mental disorders and correction of minor mental disturbances were stressed.

APPROXIMATELY ONE HUNDRED AND FIFTY friends of Dr. Lawrence Litchfield, of Pittsburgh, attended the testimonial dinner in his honor on the evening of December 6, at the Pittsburgh Athletic Association. Dr. Litchfield has been in practice for forty years and expects to retire from active work. He was presented with a handsome silver memento by the toastmaster, Dr. Edward B. Heckel. Among the guests were Dr. William S. Thayer, of Baltimore, Md., and Dr. William T. Sharpless, of West Chester, president of the State Medical Society.

THE PHILADELPHIA PEDIATRIC SOCIETY announces a prize competition to stimulate interest in pediatrics among the younger practitioners of less than six years since graduation, and residing in the Philadelphia metropolitan area. Investigations and studies to be presented must be limited to pediatric subjects. The first prize is $100 and the second prize $50, if subjects submitted are of sufficient merit. For further information, address the secretary, John D. Donnelly, M.D., Bala, Pa. Completed papers must be in the hands of the secretary not later than October 1, 1930.

THE STATED MEETING of the Philadelphia Neurological Society held on December 20 was in commemoration of the centenary of the birth of Dr. S. Weir Mitchell. The program was as follows: Dr. Chas K. Mills, "Dr. Mitchell's Services and Writings in the Periods Preceding, During, and Immediately After the Civil War"; Dr. Francis X. Dercum, "Dr. Mitchell a Physiologist in Research and in Therapeutics"; Dr. James Hendrie Lloyd, "The Doctor in Literature"; Dr. Chas. W. Burr, "Personal Recollections of Dr. Mitchell"; and Dr. William G. Spiller, "Letters and Reminiscences of Dr. Mitchell."

THE SECTION ON MEDICAL HISTORY of the College of Physicians, Philadelphia, conducted its Annual Students' Meeting, Monday evening, December 9, 1929. Senior and junior medical students and interested students of science were invited to attend. An address was delivered by Dr. James J. Walsh, New York City (by invitation), on "The Pleasant Pathway to Medical Wisdom through Medical History." The Harvey film was shown through the courtesy of the Agnew Surgical Society of the School of Medicine, University of Pennsylvania. This film, produced under the direction of Sir Thomas Lewis and Professor H. H. Dale, of London, depicts the methods which Harvey used to prove the circulation of the blood.

THE $2,000,000 New York State Psychiatric Institute and Hospital, which is a unit of the Medical Center at Broadway and West 168th Street, was dedicated December 3. In this structure, with equipment unequaled anywhere in America and probably in Europe, a program of intensive scientific research into the causes, prevention, and cure of mental diseases will be pursued. Hospitalization for both resident and outpatients and social work will be adapted to the scientific needs of the institute. The New York State Psychiatric Institute and Hospital is the outgrowth of the Psychiatric Institute, which has been operating in a small but effective way for the past twenty-five years under the control of the State Department of Mental Diseases.

THE WORKMEN'S COMPENSATION BOARD has made public its schedule of hearing dates for next year. Sessions will be held in half a dozen cities. Dates for hearings in the various places are: Philadelphia, January 29 to 31, March 26 to 28, June 4 to 6, July 16 to 18, October 1 to 3, and December 3 to 5; Harrisburg, January 28, March 25, June 3, July 15, September 30, and December 2; Pittsburgh, January 8 to 10, March 5 to 7, April 30 to May 2, June 25 to 27, September 17 to 19, and November 12 to 14; Shenandoah, February 7, April 17, July 11, October 9, and December 11; Scranton, February 5, April 15, July 9, October 7, and December 9; Wilkes-Barre, February 6, April 16, July 10, October 8, and December 10.

THE SECOND ANNUAL CONGRESS of the Pan-American Medical Association, formed five years ago, will be held in Panama City, January 30 to February 5, 1930. An exhibit will show the latest scientific developments in drugs, hospital equipment, and supplies. The scientific program will consist of formal papers and clinics, and will be devoted to the discussion and demonstration of the latest methods in combating tropical diseases. Stress will be laid on preventive methods to be employed in epidemics peculiar to Latin-American countries, including malaria and uncinariasis, which have proved so rebellious. The Congress will be held in the Gorgas Institute under the auspices of the Republic of Panama. It was a wonderful achievement of Gorgas to transform Panama from a pest hole to one of the healthiest locations in the world.

THE GERMANTOWN HOSPITAL, PHILADELPHIA, has established a diagnostic service for the use of its staff and any member of the medical profession who cares to make use of it. No patients will be accepted but those referred by their physician, and the findings in each case, together with the detailed results of the various examinations, will be transmitted to the physician, and not to the patient. The staff of the diagnostic clinic is the major staff of the hospital. The various chiefs will be in charge during the time they are on duty. On request of the referring physician or the patient, a chief not on duty may be assigned to make the examination. In all cases there will be a coördinator who will assemble the findings of the group, and transmit their joint opinion in writing to the referring physician. The schedule of charges varies from $95.50 to $306. A general health study will also be possible, the charge for this service to be $140.

THE AMERICAN ACADEMY OF PHYSICIAL THERAPY held its annual meeting at Philadelphia on December 5 and 6, 1929. The first day's meetings were held at the auditorium of the Philadelphia County Medical Society. The feature of this day's program was a symposium on electrosurgery. The second day was devoted to clinical work. The Academy visited the physical therapy clinics at the Samaritan and the Jefferson Hospitals. The meetings were well attended. Members from California, Illinois, Massachusetts, Maryland, and other states were present. The increasing interest shown

(Continued on page xviii.)

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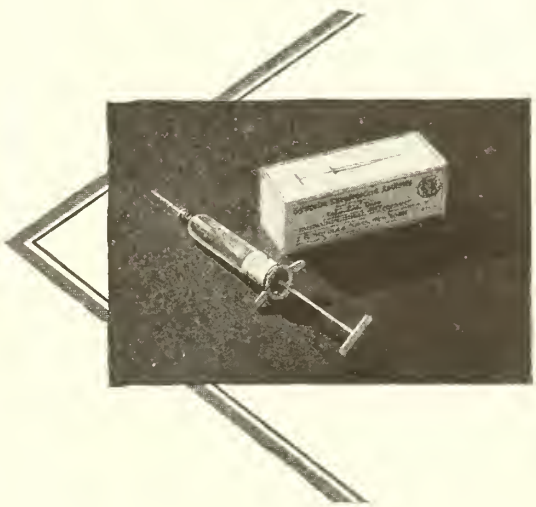

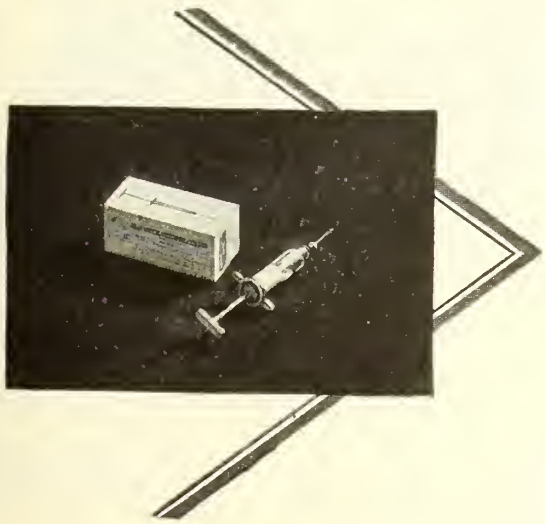

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MEDICAL NEWS

(Continued from page 282.)

in such meetings is an excellent index of the gradual growth of physical therapy throughout the country.

THE FOLLOWING MEDICAL RESERVE OFFICERS of Pennsylvania, having accepted reappointment in the Officers Reserve Corps without the privilege of active duty or assignment, have been relieved from assignments to units of the Organized Reserve as indicated:

From 79th Division: Major Ward Brinton and Major Baldwin L. Keyes, both of Philadelphia, and First Lieut. Oscar J. Eichhorn, Carnegie.

From 7th Station Hospital: First Lieut. Donald A. Fusia, Oakmont.

From 10th General Hospital: Lieut. Col. Walter E. Lee, Philadelphia.

From First Hospital Center: Capt. Henry N. School, Greene Lane.

From Third Hospital Train: Capt. Wm. H. Kelsea, East Brady.

CAPT. PERCY G. HAMLIN, Harrisburg, has been relieved from assignment to the 52nd Station Hospital and has been assigned to the 355th Observation Squadron.

FIRST LIEUT. ARTHUR B. THOMAS, Pittsburgh, has been relieved from assignment to the 99th Division and assigned to the 62nd Cavalry Division.

CAPT. FRANCIS A. DONLAN, Cresson, having moved to the Second Corps Area, has been relieved from assignment to the 375th Medical Regiment.

THE ANNUAL BANQUET of the Medical Alumni Association of the Medico-Chirurgical College was held at the Penn Athletic Club, Philadelphia, on the evening of November 21, with 180 alumni present. Dr. H. M. Goddard was toastmaster.

The election of officers resulted as follows: president, Dr. G. T. Holcombe, Oxford; first vice-pres., Dr. S. A. Loewenberg, Philadelphia; second vice-pres., Dr. Wm. C. Troxell, Allentown; and the following all residing in Philadelphia, third vice-pres., Dr. F. R. Seifert; treasurer, Dr. Robert J. Hunter; secretary, Dr. E. H. Erney; cor. secy., Dr. Basil R. Beltran; historian, Dr. A. C. Morgan.

The Scholarship Fund now amounts to approximately $8,000, which with steady increment, will soon reach $10,000. This Fund will provide for the payment of medical college tuition for sons or daughters of graduates of the Medico-Chirurgical College, who will be eligible to make their own choice of any Class-A institution. The scholarship will be administered by an alumni commission, later to be cared for by a trust company, to be held in perpetuity and to be awarded to successive generations of graduates of the Medico-Chirurgical College.

ACCORDING TO *Modern Hospital*, plans have been filed by New York Hospital and Cornell Medical College for the erection of a huge new medical center in New York City. The new center, to be erected on the east side overlooking the East River, will cover three city blocks and will be one of the most complete institutions for the unified advancement of teaching, research, and the care of the sick in the country.

The completed group will comprise thirteen buildings, all of the latest fireproof construction. The nurses' home will house 500 student and graduate nurses. One of the structures will provide quarters for 100 resident physicians. Facilities also will be provided for the training of 300 undergraduate medical students and for many advanced students in medicine.

The first eleven floors of the main building will make up a complete general hospital. The twelfth to seventeenth floors will comprise a hospital for private patients. From the eighteenth floor upward will be the living quarters for the physicians and surgeons of the

(Continued on page xx.)

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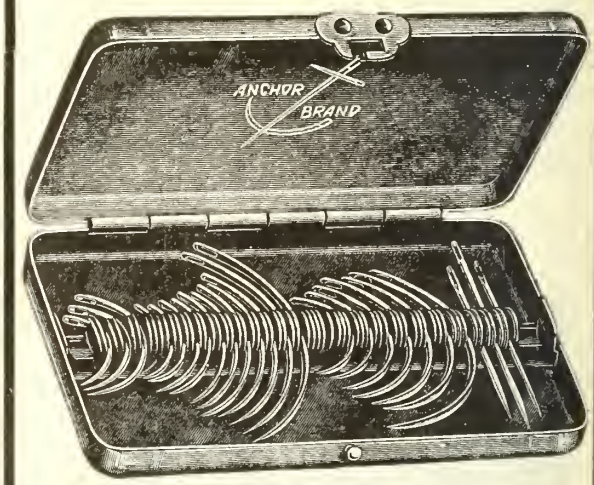

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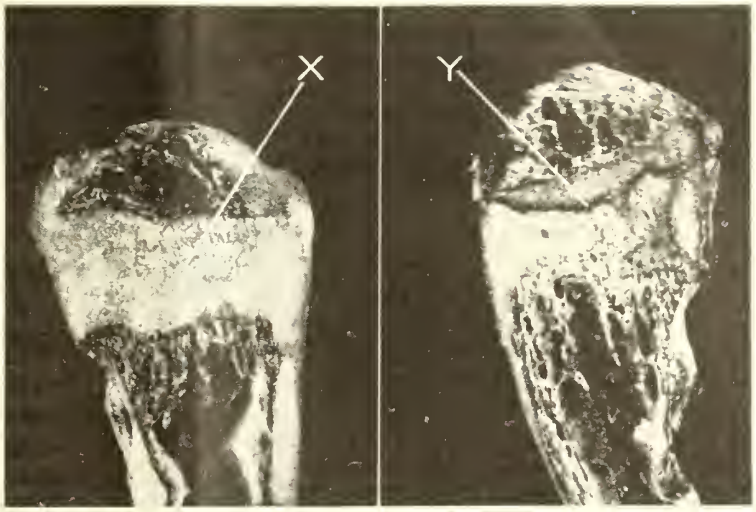


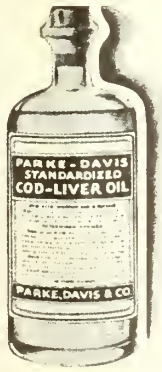
Illustrating "Line Test" method of standardizing Vitamin D content. At left, the leg bone of a rachitic rat showing induced decalcification area (X). At right, healing has begun, as evidenced by initiation of recalcification at dark line (Y).

HOW can vitamins be "measured?" What is meant by "standardized" when applied to Cod-liver Oil? Here, briefly, is the method followed in determining the vitamin content of Parke-Davis Standardized Cod-liver Oil:

To test for *vitamin A potency* the oil is given orally to young albino rats which have been fed on a diet free from vitamin A. We ascertain how much oil is needed daily to correct the induced typical eye condition (xerophthalmia) and to institute a specified rate of growth. The daily minimum amount of oil required to bring about this change constitutes one vitamin A unit.

Every lot of Parke-Davis Standardized Cod-liver Oil must contain not less than 13,500 units of vitamin A in each fluid ounce.

In determining *vitamin D potency* we use our quantitative adaptation of the "line test" technique of McCollum, Simmonds, Shipley, and Park. The oil is fed to young rats in which rickets has been induced. We measure the minimum amount of oil required per day over a period of ten days to initiate recalcification in the leg bones. This amount represents one vitamin D unit. Each fluid ounce of Parke-Davis Standardized Cod-liver Oil contains not less than 3000 vitamin D units.



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PARKE-DAVIS STANDARDIZED COD-LIVER OIL

MEDICAL NEWS

(Continued from page xviii.)

resident staff. In the basement of this central building will be the general and special diet kitchens as well as the rooms for records. Other buildings will include a maternity hospital, a children's hospital, and a hospital for mental cases.

The new center will have combined endowments and other resources amounting to $100,000,000, it is estimated. The main building is expected to cost $15,150,000. The General Education Board established by John D. Rockefeller has authorized an appropriation of $7,500,000, and a bequest of the late Payne Whitney is expected to supply $15,000,000. In addition, the hospital will ask for donations of $15,000,000 more.

THE FIFTH INTERNATIONAL CONGRESS of Physiotherapy will be held at Liege, September 4-8, 1930. The organization of this Congress is progressing rapidly, and the attention of physicians is called to the real union which will take place in Liege on the occasion of the International Exposition and the Centenary of Independence. The Congress of Physical Therapy presided over by Prof. Gunzburg and Prof. De Munter has already received recognition by twenty foreign committees, among which America will be under the presidency of Dr. William Benham Snow, editor of *Physical Therapeutics*, New York.

The important questions proposed are: (a) Rheumatism and Physiotherapy Treatment. Papers by Profs. Gunzburg for Belgium, Van Breemen for Holland, and Wierzejewsky for Poland. (b) Affections of the Central Nervous System and Physiotherapy. Paper by Dr. Delherm for France. Sections on Kinesitherapy, Electrology, Hydrology, Radiology, and Actinotherapy will treat of special questions, for which about thirty authors were solicited on the 15th of September, 1929.

These sections will be organized according to the number who attend the Congress at Liege: International Committee on Rheumatism, International Committee on Light, Curie Institute in Paris, Institute of Actinology in Paris, American Physical Therapy Association, American Roentgen Ray Society, Radiological Society of North America, Physiotherapeutic Sections of Paris, Belgium, Antwerp, Societies of Radiology of France, Poland, Belgium, French Society of Electrotherapy, French Federation of Medical States for Physical Education and Sports, Society of Hydrology of Belgium.

Acceptances may be sent from now on to Dr. Dubois-Trepagne, Secretary-General, 25 Louvrex Street, Liege, Belgium, with the dues of 150 Belgium francs. This will facilitate the organization of a Congress which will be noteworthy among the sessions of 1930.

THE FOLLOWING ITEMS of Pennsylvania interest were culled from the proceedings of the thirty-seventh annual meeting of the Association of Military Surgeons of the United States, held at Denver, Colorado, September 26 to 28, and published in the December number of *The Military Surgeon*.

The 1930 meeting will be held at Carlisle, Pa., September 26, 27, and 28. Brig. Gen. Wm. H. Wilmer, Aux. Res., U. S. Army, was elected president.

The Wellcome Prize Competition for 1929, a gold medal and $500, was awarded to Major John P. Fletcher, M.C., U. S. Army., for the best thesis on "Research—Development of Medical Field Equipment." The following subject has been selected by the Executive Committee for the 1930 competition: "The Use of Prophylactic Vaccines and Serums in the Civil Population and in the Military Service, and the Influence of Each Upon the Other."

The president in his address stated "The purpose of this Association is to conserve and promote knowledge of the principles and technic of military medicine, which

(Concluded on page xxii.)

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Physicians who inoculate a small area when vaccinating cause the least inconvenience.

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Causes no pain.
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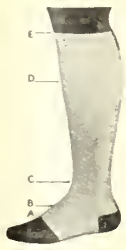

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MEDICAL NEWS

(Concluded from page xx.)

means that we should not only foster interest in this subject but should also seek to add to our store of knowledge and improve its practical application to the problems involved. This Association, therefore, in this particular field has a clearly defined objective which is both real and important."

The greater portion of the address is devoted to the position of the Public Health Service in the time of war, to call attention to an administrative medico-military situation which is deserving of consideration. There are numerous plans in existence as to what should be the work of the Public Health Service during war. The difficulty is not the problem, but rather the relationship to the medical authority. The president was empowered to appoint a committee to confer with the Resolutions Committee to prepare the necessary resolution to start action on the points made in the address.

The committee drafted a resolution requesting the Surgeons General of the Army, Navy, and Public Health Service, to present the subject, together with the action of the Association, to the Secretaries of the Treasury, War, and Navy, urging the study of and action to effectuate promptly, by agreement or by changes in existing laws and regulations, or by both means, the inclusion of the Public Health Service in the plans for national defense to the end that this service may be utilized to the maximum, and that the personnel of said service may receive status and credit similar to that of the personnel of the medical services of the land and sea military forces.

A Mexican flag was presented the Association by the Mexican Association of Military Surgeons, "in consideration of the great scientific value, the high moral significance, and the humanitarian methods of the Association of Military Surgeons of the United States, and the desire for making closer the bonds of fraternal relationship between the two Associations."

The following members were registered from Pennsylvania: Dr. J. Clifton Buck, and Lieut. Col. Henry W. Cattell, Philadelphia; Col. Ed. M. Hland, M.C., Pa., N. G., Coraopolis; and Major J. R. Smith, M.C., Pa., N. G., Erie.

THE NINTH INTENSIVE WINTER COURSE in otology will begin Monday morning, February 3, and end Saturday, February 15, 1930. This course consists of fifty hours of lectures and demonstrations, covering the anatomy, physiology, pathology, diagnosis, and treatment of diseases of the external, middle, and internal ear and the intracranial complications of middle-ear suppuration. Especial attention will be given to the functional hearing and labyrinthine tests.

An extra evening course will be given on the surgery of the mastoid, with practical exercises on the cadaver, for each one taking this course.

The third intensive winter course in diseases of the nose and accessory sinuses will be given during the same two weeks as the courses in otology, but at different hours. This arrangement will allow those coming from a distance to take all three courses.

The ninth intensive European course in otolarynology will be given in Vienna in the summer of 1930. This course covers the anatomy, physiology, pathology, diagnosis, and surgery by the best teachers in Vienna. It lasts for five weeks, averaging ten hours a day. All courses are given in the English language.

The ninth intensive European course in ophthalmology will be given in Vienna at the same time as the course in otolaryngology. This course is just as comprehensive as the one in otolaryngology. It covers three hundred hours. It includes operations on pigs' eyes, cadaver work, slit-lamp and red-free ophthalmoscopy.

For further particulars about any of these courses, address Dr. George W. Mackenzie, 1724 Spruce Street, Philadelphia, Pa.

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National Toxin-Antitoxin is prepared with refined diphtheria Antitoxin obtained from highly immunized goats therefore, should any serum be indicated in later life from equine source, the patient cannot be sensitized to horse serum with National Toxin-Antitoxin. It is safe because each lot is carefully standardized and tested for potency and is of high antigenic or protective value. Reactions are practically negligible in young children.

National Diphtheria Toxoid is a carefully tested and standardized diphtheria toxin, detoxified with formaldehyde. Many immunologists claim the Toxoid is more stable, that it gives a more rapid immunity and reactions are less than with T-A-Mixture, particularly in older children and adults.

During Cold Weather Diphtheria occurs more often than during the summer months. Protect young children, especially of the pre-school age, because they are more susceptible to diphtheria and their mortality rate is higher.

Diphtheria can be wiped out with prophylactic injections of National Toxin-Antitoxin or Diphtheria Toxoid!

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Effect of Farm Labor on Children.—According to a statement of the Children's Bureau of the United States Department of Labor, based upon a recent survey, a nation-wide problem is presented by the work of hundreds of thousands of child workers on farms in all sections of the United States. Children doing ordinary farm chores do not present a problem, but many of these children—especially the hired "hands"—work under conditions similar in many ways to those in manufacturing industries in which the employment of children is regulated.

Only six States specifically regulate the employment of children in agricultural work, and the administration of such regulations presents serious difficulties, particularly as to inspection. Among the detrimental effects of farm work for children under certain circumstances are the possibilities of physical injury, the bad housing conditions of migratory workers, and the interference with schooling. In every section of the country studied, large proportions of farm children had lost time from school for farm work.

Little is known concerning the effects of excessive farm work on the health and physical development of children. In some instances—as where very young boys and girls are required to plow and harrow or to carry large baskets of vegetables—the work is obviously too heavy for them. In the great majority of cases, however, the strain comes from long hours at monotonous and wearisome tasks. A nine- or ten-hour day in the fields is common for children who live on farms, and the day's work often stretches out to eleven or twelve hours or more.

In Colorado, the Children's Bureau had the boys and girls working in the beet fields given physical examinations in an effort to determine the physical effects of farm work. Two out of three of the children had protruding shoulder blades, as high a percentage as was found among children applying for clinic care in a large hospital, and flat foot was two or three times as prevalent among them as among other children. Both these conditions may be brought about by undue strain on immature muscles.

That physical injury may result from farm work is also borne out by a report of the committee on rural recreation of the National Country Life Association, which concludes that although farm work provides an abundance of physical exercise in the open air, farm boys and girls do not develop symmetrically. Farm work seems to overdevelop the major or fundamental muscles, while the finer or accessory muscles are neglected. Young men reared on farms tire more easily than those reared in cities. These conclusions were based in part on the fact that farm boys in the army camps were slower to respond to play stimuli and reached the point of fatigue more quickly than city boys in activities that required the use of the whole body.

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*Symposium on Carcinoma of the Uterus**

THE PREVENTION OF UTERINE CANCER

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It is generally conceded that cancer of the uterus is the most frequent clinical form of malignant disease arising in women and as a lethal malady in the female it stands in the foremost rank. It constitutes, it is claimed, about one third of all cases of cancer.

For the sake of comparison and for other reasons, bearing especially on the etiologic aspects of the topic, it may be prudent to point out that from the ages of twenty to forty tuberculosis still remains the most frequent mortal disease of womanhood with a death rate of 27,853 yearly in this country.

To me, though I suppose it is generally known, it is exceedingly disquieting to learn that in the same age period the complications of pregnancy and the accidents of labor rank next in the point of frequency with 14,582 deaths annually.

It is chiefly from the standpoint of casualty that I have referred to the group of disorders mainly accountable for the dissolution of fruitful women or women in the reproductive years. It is not the mortal, however, but quite obviously the morbid sequelæ of labor that have to do with the prevention of uterine cancer and which assume in large measure the precursors of uterine oncology of the malignant type.

This observation is substantially supported by clinical study and scientific investigation. First, one must recall that cancer arising in the uterus, like cancer elsewhere, displays a rather characteristic trend to develop in certain well-defined areas.

The first, and by far the most frequent, site is that portion of the uterus swinging from the vault of the vagina—the cervix; and the second, far less frequent, is that portion of the uterus projecting above the vaginal vault—the body. The relative frequency of the two sites is about one for the body to six or eight for the cervix, although some authors are inclined to believe that corpus carcinoma is much more frequent than hitherto assumed and occurs in the proportion of considerably more than one to ten.

Mahle, in a series of 855 cases of uterine cancer, found a ratio of 1 to 3.4. Cullen reported 25 per cent in 176, and Graves 22 per cent in 550 cases. Norris fixes the percentage at from 20 to 25 per cent. Nevertheless, the impressive fact remains that malignant disease of the cervix is infinitely the more frequent.

This cannot possibly be merely a coincidence. There must be a very real underlying factor. Since cancer of the neck of the uterus occurs mainly in married women and more especially in those who have borne children, the far greater frequency of the disease in this region it seems is properly ascribed to parturitional injury with sequential cellular alteration incident thereto. This may be regarded as the most definitely known lesion to precede cervical cancer. It may be looked upon as essentially the exciting or secondary cause of the disease.

It is taught that more than 95 per cent of the patients who develop malignant neoplasia of the cervix have borne children and that the great majority have had more than one child. In other words, the more labors the more cervical damage and ultimately more cancer. Looking briefly at the statistical picture regarding this phase of the subject, one finds abundant evidence to confirm this quite generally accepted belief.

Farrar, for example, of the Woman's Hospital, New York City, in a study of 300 consecutive case histories, found that 288 or 96 per cent of the patients had had either premature or full-term labors.

An exceedingly interesting and suggestive feature of this study disclosed that all the labors were difficult and in many instances instrumental. Still more suggestive was the revelation that many of these patients, as expressed in their own language, though "badly torn, were not repaired." In only 9 of the 288 patients were the lacerations of the cervix sutured.

*Read before the Section on Surgery of the Medical Society of the State of Pennsylvania, Erie Session, October 1, 1929.

One could cite figures almost indefinitely in further support of the rôle played by puerperal trauma in cervical carcinoma. Briefly, as a matter of emphasis and interest, Koblauch, according to the author just quoted, found cancer of the cervix in only 4.6 per cent of nonparous women, Edelberger in only 2.9 per cent, and Kroemer in only 1.77 per cent. Cullen, she states, refers to fifty patients with cervical cancer, forty-nine of whom had given birth to children. More than half of these patients were delivered of full-term babies on five or more occasions.

Viewing, then, these figures in the light of etiology, one is justified in assuming that it is injuries of the cervix inflicted during child birth, either spontaneous, manual, or instrumental, followed by eversion, erosion, and long-continued irritation, and culminating finally in cell metaplasia of the endocervix, that form the propitious background for the ultimate development of cervical cancer.

In the uterine body—a section more or less secluded and relatively immune to trauma and irritation—the disease probably owes its origin to cell metaplasia and other factors related in some mysterious and inexplicable way to the menopause. It is generally conceded that in this region the disease, while it may occur, is extraordinarily uncommon during the child-bearing age.

One may say that *all in all cancer is the most subtle and etiologically the least understood disease known.*

In the combat with any given disease, as pointed out by Graves, three factors must be considered: first, the essential or primary cause; second, the exciting or secondary cause; and, third, the cure. Inasmuch as the primary cause of cancer is wholly unknown, it becomes plain that no intelligent or effective means can be applied in that direction.

Reference has just been made to what one may regard as the exciting or secondary cause and it is here that effective helpful measures can be applied.

Coming now to consider more intimately the special theme of the topic, the prevention of cancer of the uterus, one can perceive that the solution lies, to a very large extent, in the *prevention* or prompt correction of lesions which may ultimately become cancer. In viewing this proposition in the perspective, the task assumes imposing proportions and at first sight seems almost insurmountable, for one seems justified in concluding that so long as women give birth to children just so long will cervical injury be sustained with its final culmination in cancer in a certain number of instances. In the light of these circumstances it would appear almost futile to hope for wide-spread improvement in that direction.

So long as maternity practice in this country—as well as in all others—is largely private home and not institutional practice, just so long will strong support be added to this view. Only under the most unusual auspices is it possible for the physician to render the special general care together with the local surgical attention that puerperal patients, especially primiparous women, require.

Vaginal and perineal injuries may be—though I am by no means certain they always are—repaired successfully in the private home. The procedure is in most instances extremely simple. Infection is seldom seen and hence primary union is generally the rule. Injuries of the cervix, on the other hand, are more or less inaccessible. Besides they are found in a region not only difficult to manipulate, but one which is exceedingly delicate in its resistance to infection. Moreover, it is perfectly clear that the environment in most private homes could not possibly lend itself to a high standard of aseptic surgical technic. While it may appear on the surface that the profession has been more or less derelict with regard to the proper care of cervical trauma, probably in the long run the passive attitude assumed has proved the greatest good to the greatest number. But the good is manifestly far from being good enough.

It may be said that in the main cancer of the cervix in its finality is the back wash of obstetrics, an expression of incomplete maternity service. In no other department of surgery—for obstetrics is surely a surgical specialty—can one possibly find a parallel in the callous indifference to serious injury—serious in both its immediate and remote effect—that one observes in midwifery practice.

In order to overcome the predisposing lesions arising in the cervix, one can readily appreciate the practice of obstetrics must reach a standard far higher than it has attained hitherto. During the past decade the standard of obstetric practice has improved considerably, but there is still much to be desired. I feel confident that with the wider adoption of efficient hospital care for maternity patients one can look forward rather optimistically for more zealous and finished supervision of puerperal women, especially with respect to efficient surgical care.

Though it may be many years before all midwifery patients will be able to obtain the requisite hospital treatment, I am convinced that the puerperal woman, even though she be delivered

in her home, will with each succeeding year receive superior obstetric attention.

The student graduating today is fundamentally better equipped than ever before. He is taught and is made to realize the immediate and remote dangers of cervical injury, whether resulting from spontaneous, manual, or instrumental labor. He is made to know that rarely is manual manipulation within the vagina and especially within the cervix necessary during labor. The advantages of rectal examination are pointed out and he acquires the technic of applying it in practice. *He is taught that seldom, if ever, is the cervix seriously injured in a perfectly normal labor.* The reprehensible practice of manually dilating the cervix—as so often expressed, to help the patient—is common knowledge to him and will be absolutely cast aside in his work. *He is familiar with the dictum that a cervix free of injury—a sound healthy cervix—is the best possible defense against malignant degeneration and invasion.*

Moreover, one must recall that in most states the graduate student is required to spend at least one year in a class "A" hospital—with a maternity department—and adequately equipped to meet the requirements of the state. It is here that the student becomes a postgraduate member of the department. Here he is given the opportunity to study and personally deliver anywhere from fifty to one hundred maternity patients, not to say one word regarding the knowledge he gathers from his weeks of association with skilled accoucheurs.

There is still another feature of importance in modern obstetric work. More men are attracted to the specialty than ever before and hence more and more are devoting their time exclusively to its practice. It will be interesting to observe what influence this will have in the uterine cancer situation, say at the end of the present decade.

It is obviously the preventive side of the cancer problem which needs and is fortunately receiving more attention today. With this phase of the specialty—for obstetrics is being looked upon as an exceedingly important department of preventive medicine—inculcated in the mind of the student, better work must inevitably follow.

For the general practitioner the specialist has a duty to perform in teaching him the transcendent importance of prevention. Heretofore we wandered far astray in this respect. Too much stress was placed on the early diagnosis of uterine cancer and not enough stress on the prevention, early recognition, and prompt correction of uterine lesions which might become cancer. It is to the latter feature of the problem that scientific efforts must be directed chiefly.

To portray the superlative value of cervical therapeutics as a means of prevention, Pemberton, in a study of 5,962 patients upon whom trachelorrhaphy, cervical amputation, or cauterization had been performed, reports that only five developed carcinoma. These observations depict most dramatically the benefits of the application of preventive surgery to diseased cervices. The figures cited by Ralph R. Huggins are equally as dramatic. He reports 2,985 cases of chronic cervical disease treated by cauterization or excision by the endothermic knife without a single case of cancer developing thereafter.

Thus it can readily be discerned that a paper dealing with the prevention of uterine cancer would be wholly incomplete if it failed to make some utterance relating to the prevention of essentially the forerunner of malignancy, an injured and diseased cervix. The former practice of routinely, repeatedly, and oftimes haphazardly submitting all patients to vaginal examination during labor, with the irresistible tendency to dilate digitally, stretch, and slip the attenuated cervix over the presenting part and incidentally rip the structure thereby, was unquestionably responsible for an inestimable degree of cervical damage with its train of immeasurable sequelæ. With less vaginal manipulation, both manual and implemental, so poignantly expounded in the teaching of obstetrics today, the incidence of injuries of the cervix should gradually be reduced tremendously.

Time of Repair

The repair of cervical lacerations has customarily been divided as regards time into: primary, intermediate, and secondary. In discussing this feature I shall assume a rather dogmatic attitude, because it is my custom to advocate and practice the primary operation. All things considered this appeals to me as the preferential plan. I never could see any advantage in deferring interference until the second, third, or fourth day postpartum and then adopt the intermediate operation. In no other portion of the human body would irregular, gaping wounds be allowed to go uncorrected for a like period. Should not the same surgical principle apply to a wounded cervix? Nothing is gained by delay. While in most instances cancer does not develop in cervices recently injured, no one can foretell what cellular alteration of a predisposing nature may take place during even a few months of endocervical irritation with infection.

In the process of wound repair, very definite and probably more or less change in the epithelium must occur. At the best, healing is drawn out over a period of many days or weeks. With

bacterial intrusion, it may be carried over a period of many months, and may not take place at all. Healing, it has been observed, has taken place as early as the fifth day, but under the most favorable circumstances the average is about ten days.

If the condition of the patient, her environment, or other factors are not favorable to immediate correction, then I believe it wise to postpone operation for four or six months, or in other words until complete cicatrization has taken place. Corrective surgery applied at this time is infinitely more refined and completed. With respect to secondary repair, I think one's action should be governed by the presence of the tear itself. It should be corrected forthwith.

I am not a partisan to the rather widespread teaching that operation should be deferred until the family unit is complete. This teaching is based on the rather erroneous assumption that a repaired cervix cannot withstand the stress of subsequent labor and must inevitably give way. From rather an extensive experience in work of this nature, I have not observed serious damage to a repaired cervix in future labor, provided it terminated normally.

Passing on to an item which should be included in the category of prevention, I find that biopsy must occupy quite a conspicuous place. By the practice of tissue excision for microscopic analysis, I do not mean that one is able to recognize any tissue change that could be regarded as characteristically precancerous.

Archibald Leitch claims there are no signs or histologic characteristics that enable the pathologist to predict future malignant degeneration. In his experiments this investigator used materials which almost inevitably induced cancer, but the examination of local tissues of the animals which died or were killed before tumor formation arose showed nothing that could be called a definite precancerous state. The profound change which must exist in the responsive cell, he states, does not express itself in anatomical alteration.

The gross appearance of a diseased cervix may be suggestive of carcinoma, but in doubtful cases only microscopic scrutiny can distinguish inflammatory from malignant tissue. It is in these cases that one should practice test excision for confirmation. Cooke epitomizes the value of this method of examination when he says the histologic study of biopsy specimens will, even without present knowledge, afford a sounder basis for the treatment of cervical lesions, first, by providing a means for the ready recognition of the malignant conditions and, second, by ruling out others of a suspicious nature.

Pemberton, in a study of 669 cases of cervical carcinoma, reports that in 2.39 per cent the diagnosis was based on microscopic study. Here it might be of interest to mention that this author, in accord with many other recent writers, claims that he was unable to observe any harm resulting from the procedure.

Hence biopsy does not, as was at one time taught, favor the dissemination of malignant disease. I recall most vividly that some ten years ago I was taken severely to task for having the temerity to advocate test excision in a paper I presented at a meeting of one of our local societies. Even no less an authority than Crile urges strongly against simple test curettage, because if cancer is present, he says, it will tend to disperse and disseminate the malignant cells. The consensus of opinion is wholly against this view. Norris is an ardent champion of exploratory curettage and claims that an accurate histologic diagnosis can be made of nearly one hundred per cent of the specimens thus examined.

Test curettement is about the only recourse at one's disposal to establish a diagnosis of endometrial or body carcinoma. As a means of governance in adopting curative surgery, it should be instituted immediately in all patients displaying abnormal uterine symptoms irrespective of age, but especially in those approaching, in, or after the menopausal years. In this way only is one able to recognize the disorder in its early stage and apply measures for its permanent eradication.

In discussing the preventive feature of corpus carcinoma, one must call to mind the etiologic rôle possibly played by uterine myomas and endometrial polyps. In 333 cases of corpus cancer studied by Stacy, in the Mayo Clinic, fibroids were found in 124 or 37.23 per cent of instances. In 12 patients (3.6 per cent) myomectomy had been performed previously. Polyps of the endometrium were observed in 7 or 5 per cent of the patients. In some instances the polyps themselves were the seat of malignant degeneration, while in others their presence as a source of irritation seemed to be etiologically responsible for carcinomatous development.

From the numerous organizations, both lay and scientific, scattered throughout the world, educational propaganda appears to be looked upon as the most potent preventive medium at hand. Teaching the people what they should know with respect to the prevention of cancer is extremely important, but just how education can be made a really effective agency of prevention is beyond my power to explain. Education has accomplished phenomenal results in certain conditions, notably tuberculosis; but cancer, un-

fortunately, is not amenable to similar means of prevention. From recent reports one gathers the impression that the educational campaigns have seemingly not accomplished the results hoped for. Cancer, according to Hoffman, continues to increase. The gospel of "genital health," however, must be expounded and made to reach the people.

The systematic examination of all women once or preferably twice yearly, if such a thing were feasible, during the cancer years would unquestionably prove one of the most effective means of prevention. Women should be taught not only to consult the physician when they think they are ill, but when they feel certain they are well. This, as Miller aptly points out, is a sort of insurance against evil.

The adverse criticism one occasionally hears concerning educational campaigns against cancer lacks justification. The assumption that cancer propaganda may give rise to cancer phobia is not founded on facts.

All in all by presenting the menace of cancer to the public we are not, as Moynihan so tritely says, scaring the people to death, but literally frightening them into life.

1621 Spruce Street.

THE EARLY DIAGNOSIS OF CARCINOMA OF THE UTERUS

CHARLES C. NORRIS, M.D.
PHILADELPHIA, PA.

Carcinomata of the cervix and fundus are separate and distinct tumors, occurring in various types of women, producing different symptoms, and requiring different treatment.

Carcinoma of the Cervix

Cervical carcinoma is one of the most frequent forms of cancer, being four or five times more common than carcinoma of the fundus. The ultimate five-year salvage of cervical cancer patients is not more than from 15 to 25 per cent. Early diagnosis is the most important factor governing the prognosis, having a greater bearing on the ultimate outcome than whether irradiation or panhysterectomy is performed. Early cases are rarely observed. Among 721 cases of cervical carcinoma treated in the gynecologic division of the Hospital of the University of Pennsylvania during the past six years, 71, or less than 10 per cent, were in the first stage, that in which the cancer is limited to the cervix. In my service in the radiologic department of the Philadelphia General Hospital not more than 2 per cent are seen in this stage. About 60 per cent of the first-stage cases are alive at the end of five years.

In the face of the figures here recorded and the exhaustive statistical studies that have been made, it is unnecessary to stress further the importance of early diagnosis. Cervical carcinoma is much more insidious and silent than most textbooks indicate. Carcinoma of the cervix is most frequent in subjects between the ages of thirty-five and sixty years, but occasionally occurs in younger and in older patients. It is most common during the mid-forties. In tropical countries, in which the menopausal age occurs earlier, carcinoma develops in younger women, whereas in cold climates, in which the menopause occurs later, the cancer age is more advanced. Cervical carcinoma has frequently been observed in young women. Very early carcinoma has been observed in patients in whom the artificial menopause has been induced, either by irradiation or by bilateral oöphorectomy. It would appear, therefore, that the predisposing factor is the sex age, and not the calendar age.

The cause of cancer is unknown, but three causative factors influence its etiology; namely, age, long-standing chronic irritation, and heredity. Among women the importance of heredity is undetermined, but in animals this factor doubtlessly exerts a definite influence.

Cervicitis almost routinely follows unrepaired lacerations of the cervix, and 90 per cent of cervical carcinomata occur in multiparæ. Among the remaining 10 per cent some have willfully concealed previous pregnancies; in others the cervix has been lacerated as the result of dilatation or of other operative procedures performed in an effort to overcome sterility or dysmenorrhea; and in a few cases the disease has developed upon apparently normal tissue. Graves has shown the infrequency of carcinoma in cervices that have been surgically repaired. Among our own 721 cases of carcinomata, cervical repair is recorded in only 73.

Early carcinoma may appear in the form of ulcer, nodule, or papillary outgrowth. While none of these are characteristic, all are suggestive. The nodule may readily be mistaken for a nabothian cyst. The fact that both the ulcerative and the papillary type, when touched, bleed easily, is suspicious. The nodular type soon breaks down, leaving an ulcer; indeed, it is probable that in the incipient stage all carcinomata originate in this form. Carcinoma may develop upon the face of the portio, within the canal, or more rarely in the depth of a gland. When it occurs in either of the last two locations, early recognition is obviously more difficult. The rapidity of growth and speedy evolution of symptoms are

of great diagnostic significance. The early symptoms consist of hemorrhage and discharge. The hemorrhage occurs intermenstrually, the blood being bright red in color; it tends to follow trauma. Vaginal discharge is probably the first symptom to be noted, but as a previous cervicitis has been present in most cases, the discharge is merely an augmentation of an already existing leukorrhea, and hence little significance is generally attached to this symptom. Bleeding is too frequently regarded as a menstrual irregularity due to the approaching menopause.

Hemorrhage, especially of the type previously described, calls for a thorough examination and should never be passed over lightly or treated locally until the possibility of carcinoma has been excluded. Early carcinoma may be mistaken for laceration or for eversion, cervical polypi, inflammatory lesions of the cervix, and other tumors.

The association of carcinoma with pregnancy occasionally occurs. Pregnancy often causes benign lesions to become extremely vascular, and even simple eversions frequently bleed easily upon slight trauma. On the other hand, when carcinoma is present, the resulting hemorrhage is often attributed to a complication of pregnancy, such as low insertion of the placenta. The physician is loath to perform biopsy in suspicious cases, for fear of producing an abortion or inducing premature labor. For these reasons the association of pregnancy with carcinoma complicates the diagnosis. In all suspicious cases the important point to remember is that biopsy will do little harm if the condition proves benign, but that, if a carcinoma is present, delay may cost the woman her life.

It must be remembered that in carcinoma of the cervix the diagnosis is generally made with ease in the late cases, but is difficult to formulate in the early ones. Early recognition usually results in cure. A late diagnosis has little value as regards treatment. I would stress the following routine in all suspected cases: (1) A thorough pelvic examination, which includes the inspection and palpation of the cervix under favorable conditions. (2) The insertion of the sound in the cervical canal, for it must be remembered that in some of these cases the carcinoma is not discernible either to touch or to vision. (3) If the suspicious lesion can be located, a biopsy may be performed. (4) In some cases, particularly in those in which an extensive erosion is present, a high trachelectomy is the method of choice, and if carcinoma is found to be present, applications of radium may be employed.

In passing, I may say that of our first-stage cases 80 per cent of cures have been effected as the result of the use of a high cautery amputation and radium, as against 46 per cent that were treated by radium alone. If a trachelectomy is performed and no carcinoma is definitely demonstrable, a diagnostic dilatation and curettement should be performed at the same sitting, for under these circumstances the symptoms may have been caused by fundal carcinoma.

To be effective, biopsy must include a portion of the carcinomatous tissue. To employ this method as a routine procedure, the removal of at least a moderate sized piece of tissue, and probably the insertion of one or two sutures to control bleeding, are necessary. In private practice this may be quite difficult, particularly if the vagina is small or if it is impossible to draw the cervix well down toward the outlet. A small sharp curet may be passed within the cervical canal, under aseptic conditions, taking care not to destroy the integrity of the internal os; this may yield valuable information. Trachelectomy is obviously the more certain method, and, as previously indicated, is the preferable procedure in most cases. If the carcinoma is situated in the lower portion of the cervix, the lesion may be removed entirely, for if a diseased cervix is removed, the leukorrhea will be cured, and a predisposing factor for the subsequent development of carcinoma eliminated. Of even greater importance is the fact that by this method of procedure there is no possibility of overlooking the presence of a small carcinoma, for the entire cervix is presented to the pathologist for study. Furthermore, with the patient under anesthesia, and remaining in the hospital for the time necessary following a trachelectomy, a diagnostic dilatation and curettage can be performed at the same sitting, for if the cervix proves negative for carcinoma, a fundal lesion may nevertheless be present.

The question of the possibility of dissemination of the cancer cells by biopsy has frequently been raised. If the biopsy is performed with the aid of a sharp knife and the surface is immediately seared with a cautery, this danger is practically eliminated, and the slight theoretical risk that may exist becomes infinitesimal as compared with the grave hazards that follow delay.

Although carcinoma of the fundus is less common than cancer of the cervix, it is by no means infrequent. Fundal carcinoma is rare before forty years of age, and occurs most commonly after the menopause. Patients suffering from this form of cancer are, on the average, five or six years older than those in whom cervical carcinoma occurs.

Parity plays no part as an etiologic factor, the condition being relatively as frequent among nul-

liparæ as in those who have borne children. Hemorrhage and discharge are the suggestive symptoms. The hemorrhage consists of bright red blood, occurs intermenstrually in those in whom the menopause has not developed, and tends to follow trauma. As, however, the tumor is protected more or less by the investing myometrium, the bleeding following trauma is not so severe as in cervical lesions. The leukorrheal discharge is thin, watery, often irritating and, after necrosis of the tumor has set in, emits a foul odor. Pelvic examination is usually negative. In fifty per cent of our cases no enlargement of the uterus was demonstrable. A point well worth bearing in mind is that hemorrhage which develops after the menopause has been established, and in which the ordinary pelvic examination is negative, or in which nothing beyond perhaps a slightly enlarged uterus can be detected, is more often due to carcinoma of the fundus than to all other causes combined.

The cases of carcinoma of the cervix in all stages, as they come to us, can usually be recognized with a fair degree of accuracy by clinical methods, but this is not true of fundal carcinoma. Sight and touch are not available in these cases, and the subjective symptomatology is often all that the diagnostician has to guide him. Myomata are a common cause of hemorrhage, and the small submucous tumors may readily be confused with carcinoma of the fundus. The association of myomata and carcinoma of the fundus is frequent; indeed, it is probable that carcinomata occur more commonly in myomatous than in normal uteri. A history of bleeding over a period of two or three years and the finding of an enlarged nodular uterus may readily lead to a diagnosis of myoma, and the carcinoma, which might have developed but recently, may be overlooked. It is for this reason that a diagnostic curettage should invariably precede irradiation in all cases of supposed benign hemorrhage.

Occasionally bleeding due to hemorrhoids may be regarded as vaginal in origin or vice versa. The insertion of a vaginal tampon will clear up all doubt on this point. Senile vaginitis may give rise to slight bleeding and discharge, but this can readily be differentiated from carcinoma by examination. Senile vaginitis is, however, a frequent condition, and its possible association with carcinoma must be considered. Mucous polypi may also symptomatically suggest carcinoma, as may also certain other benign lesions. Concealed as the tumor is within the uterus, a positive diagnosis of early fundal carcinoma cannot be made without the aid of the microscope. When the condition has become well advanced it may, however, be recognized with a fair degree of certainty.

A general impression prevails that fundal carcinoma is a somewhat favorable type of cancer as regards cure. A study of 101 consecutive cases from our service at the Hospital of the University of Pennsylvania showed that of these only about 33 per cent were alive at the end of three years, and that about 60 per cent of the so-called early cases were ultimately cured. The integrity of the myometrium is the prognostic feature, and although these carcinomata are more amenable to treatment than are cervical growths, the necessity for early treatment is very definite.

The diagnosis is obviously made with greater ease in those cases in which the carcinoma develops after the menopause has been established. In a suspected case I would suggest the following procedure: (1) Make a careful pelvic examination, and remember that a vigorous bimanual examination may result in slight bleeding if a carcinoma is present in the fundus. (2) Employ the Clark test in all mildly suspicious cases. This consists in cleansing the external genitalia, vagina, and cervix thoroughly with an antiseptic solution, and then, under sight, passing a sterile sound to the fundus of the uterus, gently manipulating the point of the instrument over the entire endometrial cavity.

Following this procedure, if a friable, vascular growth, such as a carcinoma, is present, a small trickle of blood will be observed to come from the cervix. The cervix should not be pierced with a tenaculum. It should be remembered that other pathologic conditions may cause bleeding following this test. In some cases, for one reason or another, it may be found impossible to pass the sound, but this is unusual. I have never seen this test fail when a carcinoma has been present, and while it is by no means a substitute for diagnostic curettage, it is an extremely valuable procedure, and possesses the following advantages: it may be performed in the office; it does not require an anesthetic or any special armamentarium; it involves no delay; it is safe; it costs nothing; and it is not dependent upon a histologic examination. In most of the suspected cases the age of pregnancy is past. It is perhaps needless to state that the test should not be employed unless the possibility of pregnancy can be excluded. Whenever positive, the Clark test should be followed by a diagnostic curettage.

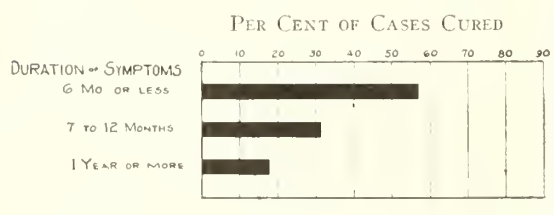
Curettage and subsequent examination by a competent pathologist of the material thus obtained constitute the most certain method of diagnosis and the one that should be employed routinely in all early cases as a preliminary to

performing hysterectomy. It has been suggested that diagnostic curettage may be a means of disseminating fundal carcinoma, and if we accept the work of Sampson, who believes that normal endometrium which is desquamated at the menstrual periods may pass out through the tubes and become implanted upon adjacent structures, this danger is not without basis. I have seen one case in which I believe an ovarian transplant from a fundal carcinoma was brought about in this manner. If, however, the dilatation is a thorough one, so that, during the remainder of the operation, there is no pistonlike action induced by the passage of instruments or radium-bearing tubes, and if irrigation and uterine packing are not employed, the risk is an extremely small one. The application of radium further reduces this hazard, as its action tends to destroy any dislodged carcinoma cells that may be present.

That this risk of dissemination is more theoretic than real is proved by a study of our cases, in which it was found that actually a higher proportion of three-year cures was obtained in those in whom a diagnostic curettage was performed than in those who were subjected to hysterectomy alone. The alternative is to perform hysterectomy in all suspicious cases or to delay treatment until the symptoms are so pronounced that a fairly certain diagnosis may be made. This means the loss of valuable time, and often permits the carcinoma to progress to a stage when even a radical operation is not permanently successful.

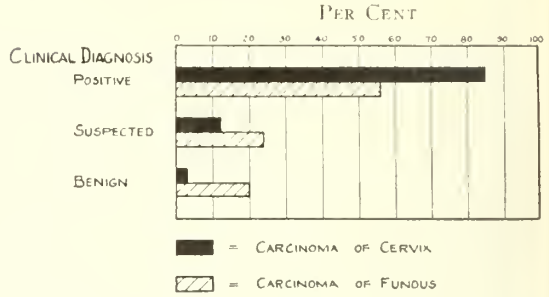
The weak point in this method is the histologic diagnosis. With a competent pathologist, a correct diagnosis can be obtained in practically 100 per cent of cases. An incompetent pathologist is a menace. It is not too much to say that in some hospitals, at least, this department is by no means satisfactorily administered, especially in relation to gynecologic diagnosis. The latter requires special knowledge and experience. Familiarity with the normal endometrium during all the changes incident to menstruation and pregnancy, as well as the appearance of benign

TABLE I. CARCINOMA OF THE FUNDUS



Percentage of three-year cures among 101 cases of carcinoma of the fundus, arranged according to the duration of symptoms prior to the institution of treatment. (From NORRIS, C. C., and VOGT, M., *Am. J. Obst. & Gynec.*, May, 1924.)

TABLE II. THE CLINICAL AS COMPARED WITH THE HISTOLOGIC DIAGNOSIS



The clinical compared with the histologic diagnosis of carcinoma of the cervix and of the fundus, based upon 241 cases of the former and 101 cases of the latter.

lesions, is essential. It is far better for the gynecologist to rely on his own judgment alone than to depend on an unskilled pathologist.

Table I demonstrates the advantages of early diagnosis, and shows that the proportion of ultimate salvage is in direct ratio to the stage during which treatment is begun.

In both cervical and fundal carcinomata the microscope is the court of last resort so far as the diagnosis is concerned. The experienced clinician can generally recognize cervical carcinoma at once, and the histologic examination is usually more or less in the nature of a verification of his diagnosis. This, however, is not the case with carcinoma of the fundus, and it is true of both these diseases that the smaller the tumor, the more difficult is its clinical recognition. In the later stages recognition clinically is easy and of little avail, so far as the ultimate outcome is concerned. Table II demonstrates the value of the microscope compared with the clinical diagnosis of both cervical and fundal carcinomata.

Of the unsuspected fundal carcinomata, three quarters were associated with myomata, which demonstrates how preëxisting benign tumors frequently mask the carcinomata.

The chief reasons for delayed diagnosis in the average case of either cervical or fundal carcinoma are: (1) Neglect by the patients, who, because of fear, modesty, or for other reasons, fail to seek medical advice until the symptoms are pronounced. The vagueness of the early symptoms, and especially the absence of pain, are contributing factors to this procrastination. (2) Failure of the physician to make a thorough pelvic examination.

CONCLUSIONS

1. The symptoms of carcinoma of either the cervix or fundus in the earliest stage are not characteristic, and a positive diagnosis at this time can be made only as the result of a histologic examination.

2. Later, however, but relatively early in the course of these diseases, the symptoms are, as a rule, sufficiently typical to warrant the formulation of a diagnosis by clinical methods in the case of cervical carcinoma, and to arouse suspicion at least in the case of fundal cancer.

3. The late diagnosis is easily made, and, so far as a permanent cure is concerned, is generally useless.

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SHALL CANCER OF THE UTERUS BE TREATED BY SURGERY OR RADIATION?*

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The means of preventing cancer of the uterus has been ably described by Dr. Bland, and the symptoms and means of early diagnosis have been well discussed by Dr. Norris. These authors and all other physicians who are dealing with cancer urge in the strongest terms the importance of early, skillful, and thorough treatment. The chances of complete and permanent recovery drop quickly from a fifty to eighty-per-cent chance to no chance at all as a result of delay.

The individual patient has the choice of operation or radiation only in the early stages, and the chance of recovery will depend in part upon the skill of the operator and the facilities available. A patient will have a better chance with a well-equipped and capable surgeon than with an unskillful or poorly equipped radiologist. Likewise, a patient is certainly more likely to recover under the care of a well-equipped and skillful radiologist than under an inexperienced or unskillful surgeon.

Surgery can be used in only about three tenths of the cases. There is no other treatment known that gives any real hope. Of these two methods, surgery is available only in the early operable and borderline cases, and as patients now come to clinics, that early group represents only about three tenths of the cases. In the more advanced cases thorough radiation gives the patient her only chance. At the present time only about twenty-nine per cent are in this early stage, leaving seventy-one per cent which can be treated only by radiation. It is hoped that as the patients and the physicians become more alert, a greater percentage of early cases will come under skillful treatment.

A careful study of statistics will probably give the most reliable answer. In making such studies and comparisons, however, we must realize the following:

(1) The surgical technic has been completely developed and has been available for twenty-five or more years, while the radiologic technic is still undergoing improvement and has been only fairly well developed during about fifteen years. The fact that such able teachers and operating gynecologists as Kelley, Polak, Clark, Norris, Healy, Lynch, and others in this country, as well as many in Europe, have abandoned operation in favor of irradiation is in itself very significant.

(2) The surgical technic has been developed upon the basis of early cases, gradually undertaking the more advanced cases until the limitations have been reached. On the other hand, radiotherapy has proved its value by beginning with the inoperable and far-advanced cases, and after obtaining good results in these cases, has gradually come to the treatment of early cases. Therefore, it is only the recent radiologic statistics from experienced radiologists or radiologic institutions that can be fairly compared. It is self-evident that the earlier a case is treated by surgery or radiotherapy, the better will be the result.

According to the statistics prepared by Seuffert from the Döderlein Clinic in Munich, it was found that of the patients with carcinoma of the cervix treated by irradiation in the operable stage, and who followed through the complete treatment, eighty per cent were well at the end of five years. This, then, is the best chance for the woman who comes early and has thorough and complete treatment. When one studies the general average of all patients who come to a clinic for treatment, however, the results are not nearly so good, because one deals with about seventy per cent who are in an advanced stage and who do not follow the best advice.

In the report from the Ministry of Health in London, published in 1927, Dr. Lane-Claypon studied the statistics of 6661 cases of cervical carcinoma operated upon by vaginal or abdominal hysterectomy and found 2227 were alive at the end of five years, making 34.1 per cent. On the other hand, she found 1117 "operable" cases which were treated by irradiation and 400 were alive at the end of five years, which is 35.8 per cent. Counting all cases which presented themselves to the surgical clinic, operable and inoperable, she found that 18.3 per cent were alive at the end of five years, while irradiation in a similar general group gave 22 per cent of five-year results. According to these general (London) statistics, therefore, the radiologic treatment showed slightly better results in the same class

* The eighty-five bibliographical references belonging to this paper have been omitted for want of space, but will be included in the author's reprints.

of cases, even though the radiologic treatment was in a developmental stage.

Ward and Farrar studied a total of 134 cases treated by irradiation, during 1919 to 1923 inclusive, and at the end of five years found 23.1 per cent living. Of the 32 "operable" and "borderline" cases in their series, 53.1 per cent were living after five years.

The Absolute Curative Values. In determining the "absolute curative value" of either surgery or irradiation, one must count all cases that come to the clinic, either "operable" or "inoperable." In making such a comparison between surgical and radiologic treatment, one should realize that a much more advanced group of cases come to the radiologic clinic than to the surgical clinic.

This difference is well illustrated by the statistics (Seuffert) from the Döderlein Clinic in Munich. During the five years, 1908 to 1912, 265 patients with cervical carcinoma applied for treatment. Of these, 167 or 66 per cent were in the "operable" and "borderline" stages. In this same gynecologic clinic the treatment of cervical carcinoma was then changed to irradiation and during the next four years, 1913 to 1916 inclusive, 500 patients applied for treatment, and of this larger number only 167 cases or 29 per cent were in the "operable" or "borderline" stages. In this clinic, the same methods of classification were used during the years of operation as during the years of radiotherapy, yet after changing from surgery to irradiation nearly twice as many applied for treatment, but only about half as great a percentage were in the "operable" and "borderline" stage. Likewise, in the other great gynecologic clinics of Europe—those of Baish, Menge, Kehrer, and Wintz in which surgery was abandoned in favor of radiotherapy, and in which the same methods of classification were utilized as for surgery—the percentage of operable cases was very much lower and a more hopeless class of patients applied for treatment when it became known that only radiologic methods were used in the clinic.

Statistics of the Operability Rate. Heyman, in reviewing the statistics of nineteen gynecologic operative clinics, found the operability rate in these several clinics to vary from 81 to 15.7 per cent or an average of 57 per cent; while in thirteen radiologic clinics the operable cases varied from 51 to 15.3 per cent, giving an average of only 29 per cent that were still in the "operable" or "borderline" stage. It will be seen, therefore, that a very much more favorable group of cases are seen in surgical clinics. In considering surgery, it is likely the family physician decides in many of the cases that they are inoperable and does not send the patient to the surgical clinic, while all classes are sent to the radiologic clinic. This is a compliment to radiotherapy, but tends to lower the statistic percentage when the total number of cases are considered. The fear of operation causes much delay, on the part of the patient, in having a proper examination made. When it becomes generally known that the earliest cases have an equal or even a better chance from irradiation than from surgical operation, patients will apply for treatment earlier. This is well illustrated by the records at the Radiumhemmet in Stockholm, where the operability rate has risen from 29.1 per cent in 1921 to 59.2 per cent in 1925, for it has become generally known that radiotherapy is the method of treatment at that institution.

Statistics of Surgery and Irradiation. Heyman has studied the statistics from twenty of the leading gynecologic clinics of the world in which surgery was used, and in which 5806 patients applied for treatment, of whom 19.1 per cent were well after five years. This percentage drops to 18.7 per cent if it is confined to the eleven largest clinics in each of which there is recorded at least 200 applicants.

From the study of the statistics from seventeen radiologic clinics and counting all applicants 3512, there was obtained a general average of 16.3 per cent of five-year cures. In comparing the results of 19.1 per cent from surgery with 16.3 per cent from radiation therapy, it must be remembered that the radiologic material contained only about one half as many cases in the operable stage. It would be fair to assume, therefore, that given the same material used in the surgical clinics, there should be about 32 per cent of five-year cures, if radiotherapy had been used.

If one confines the statistics to the "operable" and "borderline" cases only, it is found from a review of twenty-four of the leading surgical clinics in which 3659 cases were operated upon, that there is a five-year recovery of 35.5 per cent, while twelve radiologic clinics gave a general average of 34.9 per cent. In the radiologic treatment of 145 "operable" and "borderline" cases at the Radiumhemmet, there were five-year cures of 46.2 per cent.

Operative Mortality. Heyman found the primary mortality to be 17.2 per cent in 3257 cases of cancer of the cervix operated upon in twenty-four leading surgical clinics. The primary mortality from radiologic treatment is usually considered negative, but Heyman in reviewing 502 cases treated by radiotherapy at the Radiumhemmet found eight patients, or 1.59 per cent, who died in immediate connection with the radium

treatment. *Therefore, the risks from surgery are about eleven times as great as from radiotherapy.*

In dealing with the operable cases, with radiologic treatment, it should be borne in mind that the treatment involves relatively little inconvenience as compared with an extensive operation; and while 54 per cent are not well at the end of five years, the majority of the 54 per cent have palliative relief, and may be free from symptoms for one or more years; and the immediate mortality is one eleventh as great from radiation as from operation.

Only a few records give a statistical account of the morbidity either from operation or irradiation. Davis reports 17 cases of primarily healed, abdominally operated cases with the development of urinary fistulæ in four cases (25 per cent); and another four cases developed pyelitis, thrombosis, cystitis, and suppuration, respectively, giving complications in nearly 50 per cent. Gaydoul and Schmidt report from Hofmeister's Clinic five cases of damage to the urinary tract among 50 abdominal operations.

Among 502 cases treated radiologically at the Radiumhemmet from 1914 to 1921, 54 cases (15 per cent) gave some rectal reaction (tenesmus, pain, bleeding from the bowel), impaired general condition, and fever, and with ulceration in 13 cases (2.5 per cent), but fistulæ, which gave permanent inconvenience, in only 1 per cent. The deaths (1.59 per cent) occurred in septic cases from peritonitis.

The palliative results as recorded by Heyman at the Radiumhemmet in 375 patients which were not well at the end of five years and which were counted as failures obtained relief from hemorrhage in 90 per cent, with 23.4 per cent remaining free after two years. Pain was relieved in 53 per cent, and 28 per cent remained free from pain at the end of two years. Of 231 patients, unable to work at the beginning, 61.6 per cent returned to work, and 30.3 per cent remained at work at the end of two years.

It will be seen, therefore, that all in all, radiologic treatment, when applied skillfully, gives better results in any stage of cancer of the cervix.

Cancer of the Uterine Body. In most statistics, cancer of the body makes up about 10 per cent of the total cases of cancer of the uterus. Mahle, however, reported 30 per cent of carcinoma of the fundus in 855 cases of carcinoma of the uterus; Cullen, 25 per cent in 176; and Graves, 22 per cent in 550.

Nearly all authors are of the opinion that carcinoma of the body, in contradistinction to carcinoma of the cervix, should be operated upon if found to be in an operable stage. This opinion is due in part to the fact that cancer of the body can be more completely extirpated because it metastasizes less rapidly. The better results generally obtained in cancer of the fundus are probably also due to the fact that there are many more surgeons than radiotherapists who are skillful and well equipped.

When, however, a patient, suffering from cancer of the body of the uterus, is for some reason inoperable or refuses operation, then she should immediately be given skillful and thorough irradiation with radium.

In the statistics of nine surgical clinics studied by Heyman the operability percentage varied from 62 to 100 per cent and the five-year cures varied from 24.0 to 59.1 per cent, or an average of all applicants (318) of 42.8 per cent; and a recovery of 58.8 per cent, if only the operable cases are considered. Of the total number of cases (46) treated by irradiation at the Radiumhemmet from 1913 to 1921, after 5 years, 45.7 per cent were living; while if only those in an "operable" stage (25) are considered, 60 per cent were well after five years. Therefore, it will be seen from these records that the end results from thorough operation or from skillful and thorough irradiation are about the same.

Summary

1. Early diagnosis and thorough treatment of cancer of the uterus is the key to success.

2. In the general clinic, operation is possible in only 29 per cent (three tenths), because of the advanced state of the disease.

3. Surgical technic has been established twenty-five years; radiologic technic is still developing.

4. With early and complete irradiation, the Döderlein Clinic obtained 80 per cent five-year cures.

5. Dr. Lane-Claypon, London, found that of 6,661 "operable" cases *operated,* 34.1 per cent showed a five-year recovery, and of 1,117 "operable" cases *irradiated,* 35.8 per cent showed a five-year recovery.

6. Ward and Farrar found that of 134 cases *irradiated,* 23.1 per cent showed a five-year recovery, and of 32 "operable" cases *operated,* 53.1 per cent showed a five-year recovery.

7. More inoperable cases come to a radiologic than to a surgical clinic.

8. At the Döderlein Clinic, 1908 to 1912, of 265 cases, 66 per cent "operable" cases were given surgical treatment; and from 1913 to 1916, of 500 cases, 29 per cent "operable" cases were given irradiation treatment.

9. Heyman found that 19 gynecologic *opera-*

tive clinics averaged 57 per cent "operable" cases, and 13 gynecologic *radiologic* clinics averaged 29 per cent "operable" cases.

10. Early cases increase as the fear of operation decreases. At the Radiumhemmet in 1921, 29.1 per cent were in the operable stage, and at the same place in 1925, 59.2 per cent were in the operable stage.

11. Of 5,806 patients in twenty leading surgical clinics, 19.1 per cent were well after five years. In eleven of the largest surgical clinics (200 or more patients), 18.7 per cent were well after five years. Of 3,512 patients in seventeen radiologic clinics, 16.3 per cent were well after five years. With the same material as in the surgical clinics, it was found that of 57 per cent "operable" cases, 32 per cent showed a five-year recovery.

12. Of 3,659 "operable" and "borderline" cases in twenty-four surgical clinics, 35.5 per cent were well after five years. Of "operable" and "borderline" cases in twelve radiologic clinics, 34.9 per cent were living after five years. (In many of these clinics the technic is not fully developed.) Of 145 "operable and borderline" cases at the Radiumhemmet, 46.2 per cent were well after five years.

13. Heyman found the *operative* mortality to be 17.2 per cent for 3,257 cases in twenty-four clinics, and the *radiologic* mortality 1.59 per cent for 502 cases.

14. Of 54 per cent radiologic cases which did not recover, it was found that most of them were relieved from one to two years.

15. Cancer of the fundus may be treated by irradiation when operation is contraindicated.

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ABSTRACT OF DISCUSSION

Of Symposium on Carcinoma of the Uterus

FRANK C. HAMMOND, M.D. (Philadelphia, Pa.): Cancer of the uterus must be considered from the preventive and curative standpoints. We cannot stress too strongly the urge for proper attention to the precancerous lesions of the cervix, and the necessity for early diagnosis and placing the patient under skillful treatment, early.

Naturally, our appeal is to the attending physician who sees the patient first, and who should insist upon a pelvic examination in all women, irrespective of age or social position, who complain of leukorrhea, bleeding between menstrual periods, daily blood spotting however slight; or bloody discharge from the vagina following coition, the use of a douche, or straining incident to urination or defecation. In this way only will the diagnosis of carcinoma of the cervix be determined more early than otherwise. In making a vaginal examination, and with the cervix eliminated as a cause of the bleeding, the physician must seek further, and not finding any palpable pathology in the pelvis to account for the uterine bleeding, nor any constitutional cause, must always bear in mind malignancy of the body of the uterus. Patients have been referred for diagnosis by attending physicians who have stated that they had not given a thought to carcinoma of the fundus uteri. The details of diagnosis and treatment of cancer of the cervix and fundus uteri have been so definitely outlined in the papers that physicians should have no difficulty in realizing the strategic position they occupy; first, in insisting without delay upon a pelvic examination, and if not competent or so situated to afford the necessary procedures for diagnosis and treatment, to insist upon the patient being referred where the same may be done.

Postmenopausal bleeding should always be considered malignant until it is proved otherwise. The question of age must not mislead. The physician should bear in mind that carcinoma of the uterus may occur in the twenties or thirties. He has no interest in the percentage of cases that occur between twenty and thirty, or thirty and forty, but he should know that they do occur under forty. In approaching a woman for examination, with a history of genital bleeding, the physician should not have preconceived ideas influenced by age, race, social status, etc., but rather, here is a woman whose chief complaint is genital bleeding. What is the cause?

Much publicity is being given to the need for periodic health examinations. Too often people go to a physician only to find that he is not coöperative, or conducts the examination in a perfunctory manner. There is no individual to whom a periodic health examination is more important than the adult female, especially the one who has borne children. Seldom, if ever, does the physician routinely make a vaginal examination in women as part of the periodic health examination, and some never think of doing so if the woman has never been pregnant or is a virgin. The physician should be mindful that cancer of the cervix and fundus uteri occur in the nulliparous and the virgin—of course, to a far lesser extent than the woman who has been pregnant—but the point to be emphasized is that cancer of the uterus does occur in these women.

As to surgery vs. radiation in the treatment: (1) my practice is, in cases of cancer of the cervix, more especially of the squamous-cell type, if seen sufficiently early, to operate and follow this by irradiation. Of course, this is only occasional, irradiation being almost routine. The question naturally arises what do I consider sufficiently early. That is a very difficult answer to put into words. Only the operator after a careful study of his patient can formulate the reply; it depends on whether or not he considers the respective patient is seen sufficiently early to be given the chance that may accrue from operation or not; and (2) as to cancer of the body of the uterus, my feeling is that this type is primarily surgical, unless considered inoperative.

The more one digests the papers presented in this symposium, the more one must be convinced that the number of cases of cancer of the cervix uteri coming too late for any form of curative treatment is so appalling that the surgeon is ever devising ways and means by which the deadly malady may be more generally detected at the earliest possible moment—and at a time when something definite can be done. Recognition of the process in the earliest stages, or far better still, the identification of those lesions which are definitely known to be the forerunners of malignancy in the majority of cases, is most imperative.

The cervix because of its location is strikingly susceptible to infection, trauma, and malignancy. From the pathologic and histologic standpoints, there is no dis-

counting that clinically there are very distinct precancerous lesions. Any teaching to the contrary is vicious and a hindrance to the early recognition of dangerous conditions. Therefore, we cannot urge too strongly the need for periodic examination of women, and the education of the public to the need of women, with any bleeding or bloody smears from the genital tract, immediately consulting their physician; and further, securing the proper attitude of the physician as to the manner in which he receives these patients, and his great responsibility in the premises.

The ordinary cervical examination is not very searching or thorough. Too often is too much taken for granted. Good exposure and good light are essential. The trained observer can detect those lesions which should be considered suspicious. If we can create a highly suspicious attitude in our minds regarding cervical disease, irrespective of age, no matter how insignificant it may seem to appear, and if we can repeatedly emphasize the importance of careful examinations annually, and more frequently if conditions indicate, then we will make a distinct advance in the diagnosis, prevention, and treatment of cancer of the cervix. With due regard to what has been stated in the three papers presented in this symposium, then and not until then will an increasing number of cases of cancer of the cervix be prevented rather than cured.

THE SKIN IN TUBERCULOSIS*

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Since Koch announced the bacillus of tuberculosis and subsequently demonstrated its presence in the lesions of lupus vulgaris, many and varied diseases, previously classified in as many divisions of dermatology, have been added to the group now under the heading of tuberculosis cutis.

With proof of this one cause for many clinical pictures, we have come to recognize that modifications of lesions by differences in individual as well as in local tissue resistance may make cutaneous tuberculosis as multiform as cutaneous syphilis.

Frankly tuberculous lesions include lupus vulgaris, scrofuloderma, tuberculosis verrucosa cutis, and ulcus tuberculosum cutis. The group, named by Darier "tuberculides," is composed of skin lesions produced by toxins elaborated focally and absorbed into the blood stream and are really manifestations of allergy. This group includes lichen scrofulosus, erythema induratum, papulonecrotic tuberculid, and sarcoids.

All these lesions, more especially those of lupus vulgaris, are common in some parts of the world, as on the continent of Europe, and somewhat infrequent in others. In England two per cent of all cutaneous lesions are tuberculous. In America the percentage is less than one half of one per cent.

Tuberculosis cutis differs from syphilis in that it may exist independently of visceral or bloodstream infection; it is, nevertheless, true that the majority of cases suffer from tuberculosis in some other organ and infect their skins secondarily, or are the offspring of tuberculous parentage. In 159 cases of tuberculosis cutis, Bender demonstrated visceral involvement in 99; in 144 cases, Block demonstrated visceral involvement in 114; in 312 cases, Leloir demonstrated pulmonary involvement in 98; in 115 cases, Sachs demonstrated visceral involvement in 100; in 50 cases, Shiele demonstrated visceral involvement in 45; in all cases, Renouard demonstrated visceral involvement in 50 per cent; in all cases, Haslund demonstrated visceral involvement in 60 per cent. This gives an average of 63 per cent.

The postulates laid down for the establishment of a skin lesion as tuberculous have been: (1) The bacillus of tuberculosis shall be found in the lesion. (2) Inoculation of diseased tissue into a susceptible animal should give positive results. (3) A general and local reaction should follow the injection of tuberculin. Not all these criteria have been satisfied in each of the lesions believed to be tuberculous but, as Hartzell points out, imperfections of technic prevent present demonstrations, and he expresses the belief that eventually even the so-called tuberculids will have to be transferred to the class of true infections.

Tuberculids

Olson and Sequiera summarize the present beliefs in regard to tuberculids: "The cutaneous tuberculids are a manifestation of allergy in subjects in whom there is a manifest or latent focus of tuberculosis. Every sufferer from tuberculids gives a positive cutireaction. The tuberculids are therefore spontaneous examples of Koch's phenomena. There is, therefore, no need to explain the genesis of tuberculids by the circulation of toxins or of dead bacilli, nor to suppose that the necrotic emboli to which they are evidently due are composed of bacilli in an attenuated state or of low virulence. Their researches show that in an allergic subject a virulent exogenic reinoculation causes a lesion which heals because the bacilli are destroyed in situ. This destruction is of variable rapidity and completeness. The tuberculids are caused by an endogenous reinoculation, possess all the characters of the phenomena of Koch, and are in all respects similar to the lesions produced by a virulent exogenic reinoculation."

*Read before the Section on Dermatology of the Medical Society of the State of Pennsylvania, Erie Session, October 1, 1929.

Paths of Infection

Infection is said to be primary when the entrance of the tubercle bacillus is into the skin of an individual who up to the time of inoculation had been free from tuberculosis. After bacilli have been deposited on the skin, admission may be gained through any wound, previous disease, or imperceptible abrasion. Among the many cases to illustrate methods of inoculation have been infections beginning in vaccination wounds, earring wounds, minor and major wounds on the hands of pathologists in doing postmortem work, and in doctors, veterinarians, butchers, cooks, housemaids, and others whose work exposes them to infection. Dubreuith collected seventeen cases of infection on the penis following ritual circumcision where the wound was moistened with saliva. Leloir relates the case of a characteristic lupus appearing at the site of a chronic eczema which had been treated with a bread poultice moistened by saliva of the mother who was frankly phthisical.

The majority of infections, however, are cases of autoinoculation, as by contamination of the skin by infected secretions. A large section of cases begin at the mucocutaneous junctions or by contact of the skin with mucous secretions. The skin may also be infected directly from some underlying focus in glands or bone. Infection may be by way of a sinus or by way of lymph channels. The bacilli may also be spread through the blood stream. Adamson reports multiple lupus vulgaris consecutive to measles, and Phillipson reports two cases after scarlet fever. Here it is supposed that the acute illness softens an internal focus and sends a shower of bacilli into the blood.

Lupus Vulgaris

The striking resemblance, first shown by Virchow, between a caseous miliary tubercle, and a lupus nodule had, even before Koch's discovery, pointed to an identity of origin. Friedländer also had argued that the difference was not distinct enough to separate the two affections.

In the same patient, the disease may be associated with other varieties of tuberculosis of the skin, such as verrucous tuberculosis, scrofuloderma, and ulcers. Visceral, pulmonary, bone, and joint lesions may also accompany the disease.

According to Finsen, 70 to 80 per cent of the cases treated in his light clinic showed involvement of the nose and mouth. Bender, in 380 cases, found 45 per cent with involvement of the nose or mouth.

Bender, in 374 cases, found the lesions on the face in 287; on the upper extremity in 51; on the lower extremity in 15; on the face and neck in 12; on the face and arms in 3; on the ear in 2; on the hands and feet in 1; on the nape of the neck in 1; on the back in 1; and generalized in 1. In an analysis of 64 cases, Hazen reported 39 to be papular; 14 to be verrucose; 3, psoriasiform; 1, ulcerative; 1, nodular; 6, mixed.

Scrofuloderma

Under the name scrofuloderma were formerly included a number of chronic inflammatory conditions of the skin attended by suppuration and ulceration, occurring in individuals of the so-called strumous diathesis. At the present time, the term is restricted to certain chronic affections chiefly of the ulcerative type, secondary to tuberculous adenitis and to circumscribed gummalike infiltrations of the subcutaneous tissues. It is usually an affection of childhood and commonly associated with other symptoms of a tuberculous nature such as keratitis, chronic otitis, or bone and joint disease. According to Unna, the extensive necrosis is due to the toxic effect of considerable collections of bacilli which are freely demonstrable. Wende reports a case appearing first on the scalp.

Tuberculosis Verrucosa Cutis

There are two types of this disease: (1) Anatomical tubercles, and (2) verrucous (a) fungous (Riehl), (b) papillomatous (Morrow).

Tuberculosis verrucosa cutis was long recognized under the name of verruca necrogenica of Wilks, or anatomical wart or tubercle. To the French writers, notably Besnier and Widal, belongs credit for first directing attention to the fact that it occurred often on the hands of persons making autopsies on tuberculous subjects and pointing out its resemblance to lupus.

In 1886, Riehl and Paltauf described a new form under the name of "tuberculosis verrucosa cutis," found on the hands of butchers, cooks, and those caring for animals and animal products. This description was based on the observation of fourteen cases in Kaposi's Clinic and were much more extensive than the anatomical wart.

Ulcus Tuberculosum Cutis

Chiari was one of the first to attract attention to this form of ulcer which he found upon the cadaver. He was soon followed by Jarisch with a case in which the probable diagnosis was made intra vitam. The rarity of this form may be seen by the observations of Chiari who examined 7,000 bodies (60 per cent were tuberculous) with reference to these lesions and found only 5, all on the lower lip. The situation of these

lesions is almost exclusively at the mucocutaneous junction, although Jarisch, Leloir, and Vallas report instances in other parts.

It has been said that, without exception, these cutaneous lesions are part of a general tuberculosis which goes on rapidly to a fatal end. Kaposi takes exception to this by stating the experience that such cases do occasionally recover.

Lichen Scrofulosorum

While extremely rare in the United States, this form is not uncommon in England. The tissue changes are those of tuberculosis. Searches for the bacillus of Koch have been mostly in vain although Jacobi and Wolff demonstrated them to be sparingly present. Jacobi and Pellizzari have also been the only persons reporting success with inoculation experiments.

In fourteen of sixteen cases, Jadassohn observed a more or less characteristic reaction to tuberculin. Nohl reports five cases in which a typical reaction followed inunctions of tuberculin ointment.

Erythema Induratum

Thibierge and Ravaut's successful inoculation experiments place this condition as tuberculous. The bacillus itself has never been demonstrated. The inoculation experiments together with the typical reactions of the lesions to tuberculin, as observed by Montegazza and Jadassohn, leave little doubt concerning their tuberculous character. The lesions were described originally by Bazin and according to him they were confounded with erythema nodosum. On the other hand, Foerster and others have shown that typical cases of erythema nodosum may be due to tuberculosis.

Sarcoids

Boeck's notable paper in 1897 admittedly established his sarcoid as a morphologic entity. Both Boeck and Darier believed the sarcoids to be tuberculous in origin. Other nodular cutaneous lesions as lupus pernio and erythema induratum seemed so closely related to sarcoids that Lewandowsky and Kryle coined the term "tuberculosis cutis induratum" for this entire group.

Darier classifies this group as follows: (1) The multiple benign sarcoid of Boeck. (2) The subcutaneous sarcoid of Darier-Roussy. (3) Nodular erythema-induratumlike sarcoid of the extremities. (4) The Spiegler-Fendt sarcoid with some apparent kinship to the neoplastic lymphoderma. (5) The mixed type.

The term "sarcoid" had first been employed by Kaposi to designate a group of new growths of the skin which, while resembling sarcoma in histopathology, differed in clinical course and termination.

In about one third of the cases reported tuberculosis was present, usually in the lymph glands, and in about the same proportion a positive tuberculin reaction was noted.

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ABSTRACT OF DISCUSSION

Fred D. Weidman, M.D. (Llanerch, Pa.): The subject of the paper of Drs. Knowles and Ludy is always in order for a mixed medical audience, because in tuberculosis there are such great possibilities in diagnosis which have an important bearing upon the welfare and even the life of the individual. There are many dermatoses, pyodermias, for instance, in which the diagnosis is of secondary consideration; treatment is the important phase. But in the case of tuberculosis, and also in syphilis, we have one of the most pertinent examples of a protean disease with great possibilities in the way of clever diagnosis that may be life-saving in its final outcome.

As Dr. Knowles states, in skin tuberculosis we hear such expressions as lupus vulgaris; sometimes the lesions are warty (tuberculosis verrucosa cutis); and in other cases scar formations dominate the picture (scrofuloderma); and so it is that there is no one set description by which the general practitioner can come to learn tuberculosis of the skin or to diagnose it. Therefore, putting one's self in the position of the general practitioner and given a long gamut of possible dermatoses, one is often in a plight as to whether tuberculosis or syphilis is being encountered. From the history, etc., one may obtain certain impressions in the case, but these are not nearly as likely to be final and satisfying as the conclusions one will reach, for instance, in relation to the pyodermias. As in syphilis, if there is any field where the dermatologic expert can be useful and call upon experience in clearing up a dermatologic problem it is in tuberculosis.

Time and time again we have seen instances where tuberculosis of the skin has led to surgical operations. I recall a little girl with marked ascites whom Dr. Hartzell was called in to see. She had lupus vulgaris lesions over the lumbar region. Simple laparotomy was performed, and the well-known improvement occurred. It is always in order to remind the practitioner that in the skin there are definite and certain leads to internal diagnosis.

*Symposium on the Cause of Death in the Newborn**

A CLINICAL AND AUTOPSY STUDY OF 165 NEWBORN INFANTS

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To the layman birth is looked upon as the most important event in life. It signifies the completion of Nature's fruition and marks the beginning of a new life. We know, however, that birth is by no means the beginning of life, but simply an incident, fraught with many dangers and possibilities. There are as many dangers to life before birth as afterward.

During the four-year period from September, 1925, to September, 1929, in the maternity ward of the Jefferson Medical College Hospital 2,197 babies were delivered. Of this number 117, or 5.28 per cent, were stillborn. Of the remainder, 103, or 4.95 per cent, died during the neonatal period. It has been variously estimated that stillbirths average from 3 to 10 per cent of all babies delivered, and this average is still higher in cases of illegitimacy. The death rate during this period is 49 per 1,000 live births; which is higher than the death rate for diseases of early infancy and malformations published in a recent issue of *Mortality Statistics* by the Pennsylvania State Health Department.

During the period from 1906 to 1928 the mortality of early infancy was reduced from 33 per 1,000 live births to 26.9 per 1,000 live births. The reduction in the number of malformations was from 9.4 per 1,000 live births to 7.9 per 1,000 live births. Very little has been done in recent years to lower this neonatal death rate. The New Zealand rate is almost as high now as it was in 1876. In Pennsylvania the infant mortality rate has been lowered rapidly from 166 per 1,000 live births to 70 per 1,000 live births. During the 22-year period from 1906 to 1928, the greatest reduction has taken place in gastro-intestinal diseases, having been reduced from 47.8 per 1,000 live births to 8.7 per 1,000 live births. A great reduction has been made also in diseases of the respiratory tract and from all other causes of death.

This study is based on the records of the autopsies of 165 newborn babies, made during the four-year period before mentioned. These cases were secured mainly from the maternity ward of Jefferson Hospital; a few were taken from private nurseries and a few from the out-patient service. Unless sufficient data could be secured, the case was discarded. Of this group, 46 infants died before delivery, 24 died during delivery, and 95 died during the neonatal period.

ANTENATAL FACTORS

Of the 165 infants brought for autopsy, 83 were white and 82 colored. There were 78 males and 87 females. This relationship between males and females is unusual. There is usually a greater preponderance of deaths among males than among females, in the ratio of 100 females to 135 males. There were 13 illegitimate children. Thirteen were extreme emergency cases brought in at the last minute—so to speak. Seventy-nine of these infants were full-term children, and 86 were prematurely born, 48 of the latter being colored and 38 white.

The youngest mother was 15 years of age and the oldest mother 44 years, the average age being 26.5 years. Looking at it another way, there were 25 mothers who were less than 20 years of age; 50 mothers over 30 years of age; and 90 mothers between the ages of 20 and 30 years, which is supposed to be the best age for child-bearing. Again, it is usually believed that primiparæ have more difficulty giving birth to children than they do during subsequent births. This study shows that there were 60, or 36 per cent, primiparæ and 105, or 64 per cent, multiparæ. For thirty-four of the mothers, it was the second child; for 18, the third child; for 9, the fourth child; for 12, the fifth child; for 7, the sixth child; for 8, the seventh child; for 8, the eighth child; for 5, the ninth child; for 4, the tenth child, for 3, the eleventh child; for 4, the twelfth child; for 1, the thirteenth child; and for 1, the fourteenth child.

The effect of prenatal care has been demonstrated many times, but not more strikingly than in Boston, under the Instructive District Nurses' Association, where the infant death rate was reduced from 32 to 14.1 per 1,000 live births, and the stillbirth rate reduced from 34.9 to 22.7 per 1,000 live births. A study of these 165 cases shows that only 71 had been given prenatal care in the obstetrical department. The other 94 cases were rushed to the hospital because of a complication of labor that needed some obstetrical operation.

A further study of this group of mothers shows that 57 of them had a severe form of secondary anemia, in which their hemoglobin was under 50 per cent and the red-cell count under 2,500,000. Secondary anemia in a pregnant mother is a common factor and is found in about 50 per cent of all pregnant women. It can be

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readily understood, however, that secondary anemia in the mother, with the consequent lack of proper oxygen-carrying properties, would have some effect on the fetus *in utero*. It has been recognized that acute infections in the mother have a decided influence on the well-being of her infant. There is always the possibility that the acute infection itself may be passed across the placental membrane and infect the child. It is well known that smallpox, measles, pneumonia, and other acute infections have been transmitted to the child *in utero* and the acute infection found in the child. In the group studied there was one mother with pyelitis, one with pneumonia, two with acute bronchitis, one with rheumatic fever, one with pleurisy, and one with acute gonorrhea. In only one case could we trace any connection between the acute infection of the mother and the death of the child.

The effect of chronic infections on the growing infant has been clearly shown in this group. There was one case of epilepsy, three of tuberculosis, four of heart disease, two of nephritis, one of diabetes, and thirty-two of syphilis. Unquestionably chronic infections, as well as the deficient functioning of the body in general, will have a marked detrimental effect upon the growing infant.

Many times multiple pregnancies are the cause of prematurely and immaturely developed infants. In this group there were twelve cases of multiple pregnancy; there were eleven pairs of twins and one set of triplets. Only five of the children born in multiple pregnancy were discharged from the hospital; the other twenty are included in this autopsy report.

Table 1. Cause of Death, Before Delivery, of 46 Infants

	No. of Cases
Syphilis	17
Prematurity	9
Long labor	9
Toxemia	8
Cerebral hemorrhage	14
Kinking of cord	3
Malformation	2
Unknown	1

Among the prenatal conditions, toxemia of pregnancy has a very lethal effect upon the child. Fetal death in toxemia of pregnancy may be due to infarction of a large part of the placenta; or it may be by direct action of the maternal toxin upon the fetus, causing degeneration of its liver, spleen, kidney, and other organs. Then, too, the obstetrical measures adopted for the relief of the mother may cause some form of birth injury. In preventing toxemia in the mother, due attention to the kidney and bowel function, by rest, diet, and laxatives, will free those organs of excess burdens and help them better to eliminate the toxins. Dental caries and pyorrhea should be corrected, for they in particular throw excess burdens on the kidneys and liver. The demand of the growing fetus for calcium may rob the mother and so increase her dental caries. Furnishing sufficient calcium to the pregnant mother, either in food or as medicine, and employing some means such as sunlight or irradiated ergosterol to insure its proper utilization, will help prevent toxemia.

Table 2. Cause of Death, During Delivery, of 24 Infants

	No. of Cases
Cerebral hemorrhage	11
Toxemia	4
Syphilis	1
Prolapse of cord	2
Rupture of liver	3
Fracture of 7th cervical vertebra	1
Premature birth	8
Long labor; difficult delivery	12

It is frequently stated that toxemia is more frequent in primiparæ. In this group, however, there were thirteen multiparæ and only seven primiparæ. In eight of these cases of toxemia, the mother gave birth to a living child; these same eight infants, however, died shortly after birth. Erdley Holland found that toxemia was the cause of death in 10 per cent of antenatal deaths; while Feldman places the rate between 7.7 to 20.1 per cent. Of 715 deaths that occurred over a period of nineteen years, Whitehouse found toxemia to have caused 13.1 per cent deaths.

In the chronic infections, syphilis ranks first as the cause of antenatal deaths. In the group studied there were 32 mothers with a positive Wassermann reaction. That is an incidence of 19.4 per cent, which is somewhat higher than is usually given as an incidence of syphilis in pregnant women. Of the thirty-two cases in which syphilis played a part, seventeen (36.9 per cent) died before delivery, one died during delivery, and eight (8.4 per cent) died during the neonatal period. Syphilis may act in many ways on the growing infant. It may cause placental infarction, or it may cause arteritis of the umbilical cord, in each case causing deficient oxygenation. If the infection occurs early in pregnancy, the organism may pass into the growing fetus and be found in various organs.

Certain placental anomalies have a marked influence on the well-being of the growing fetus. Placenta prævia occurred in four cases, and premature separation of the placenta occurred in three cases. In many cases placental infarction

was noted, in one case it was sufficient to be held the cause of the death of the infant. Unquestionably large areas of placental infarction have a decided influence in limiting the transference of oxygen, food supplies, and waste products from mother to child or child to mother.

Of the 24 who died during delivery, long and difficult labor with consequent trauma occurred in twelve cases. Of these there were three forceps, four versions, two breech extractions, and three spontaneous deliveries. Of the entire group of 165 infants, the shortest labor was one hour, the longest 162 hours. There were 29 patients in labor under six hours; 25, from six to twelve hours; and 39 over twenty-four hours. In 47 cases the length of labor was too indefinite to be considered. The type of delivery is an important factor. Although contrary to what is expected, 107 of these cases were delivered spontaneously, 14 by forceps, 12 by version, 7 by section, and 16 by breech extraction. Undoubtedly the trauma of the child during long labor and difficult delivery in many cases is most severe.

Of the total group of 165, there were 49 or 29.7 per cent with intracranial hemorrhage. Warwick found cerebral hemorrhage in 44 per cent in a series of 200 cases, while Schwartz found it in 65 per cent of stillborn fetuses and infants less than five months of age. The latter states that the pathology of the first month of life is completely dominated by the birth injuries of the brain. Of the 49 cases, 26 were premature and 23 full-term infants. Thirteen were delivered by forceps, six by version, twenty-four spontaneously, one by cesarean section, and eight by breech extraction. In the types of delivery, there is some overlapping, because version and forceps or breech and forceps may have been applied to the same case. The conditions associated with these cases of cerebral hemorrhage undoubtedly have had some influence in its causation. One of these cases had a marked intracranial hemorrhage without any definite injury. Syphilis and toxemia had some influence in three, and one case of placenta prævia delivered by section can probably be explained by the difference between the intra-uterine and atmospheric pressures.

In 41 cases, or 24.8 per cent, asphyxia was given as the cause of death. Some of these can be explained by cord complications, such as prolapse of cord (cord wound around the neck or body of the child), too short a cord, or one not of sufficient length to allow birth without stretching or distorting it, shutting off the fetal circulation. In other cases there may have been concealed prolapse of the cord. Cases of prolonged labor and placental separations have been instrumental in causing some of the cases of asphyxia. There is also an interrelation of asphyxia and cerebral hemorrhage.

According to Table 3, of the 165 cases 95 died in the neonatal period. In the factors influencing the death of these children, prematurity in 54 cases stands out prominently. As is well known, the big problems in the care of premature infants are the proper and adequate control of their temperatures, the giving of digestible food that will produce growth, and the prevention of infection. The prevention of premature births will do much to lower the mortality of infancy and the morbid conditions that result in such cases.

Another big factor in this group of cases is the prevention of infection. This applies not only to the premature child, but to the full-term child as well. In this group there were fifteen cases of bronchopneumonia and three cases of

TABLE 3. POSTNATAL INFLUENCES

Cause of death of 95 infants		*No. of Cases*
Prematurity		54
Cerebral hemorrhage	clinical	13
	autopsy	24
Bronchopneumonia	clinical	5
	autopsy	15
Toxemia		11
Syphilis		8
Nephritis		4
Malformation		10
Hemorrhagic disease		2

acute nephritis. The fourth, diagnosed as uremia, was a case in which the child showed complete absence of both kidneys.

Hemorrhagic disease of the newborn occurred in but two of these cases, and the diagnosis was not made until it was found that the bleeding and coagulation times were prolonged.

In the group of 165 cases there were fourteen, or 8 per cent, cases of malformations. In this group of malformations there was one case of complete absence of kidneys; two cases of hydrocephalus; two monstrosities with multiple malformations, one having a pelvic kidney. There was only one case of congenital heart disease, although slight cardiac defects were noted in the two monsters, and one case of malformed biliary ducts. In one case there was stenosis of the esophagus. There were three cases of spina bifida with associated hydrocephalus; one case of cleft palate and harelip, which died of bronchopneumonia following an operation for the harelip; one case of imperforate anus, which died of peritonitis following attempts to make an opening into the rectum; and one case of a large hernia of the umbilical cord.

In considering the length of life of the 95 infants dying during the neonatal period, we find that 55 of them, or 58 per cent, died within the first twenty-four hours and that 43 of the 55 died within the first twelve hours after birth. Nine died within the second day; 6 on the third day; 2 on the fourth day; 6 on the fifth day; 2 on the sixth day; 4 on the seventh day; 1 died during the second week; and 10 died after two weeks.

An attempt has been made in Table 4 to give the final diagnosis of the cause of death in this group of cases. Conclusions have been reached by weighing all clinical and pathologic data. Cases have been reviewed many times in an effort to gain and to give exact information. It is interesting to note that the clinical and pathologic diagnoses agreed in 121 cases and disagreed in 44 cases. In some of these cases the clinical data outweighed findings at autopsy; in others the autopsy findings were conclusive.

Table 4. Final Diagnosis of Causes of Death

	No. of Cases
Prematurity	86
Syphilis { premature	19
Syphilis { full-term	13
Bronchopneumonia { premature	9
Bronchopneumonia { full-term	11
Toxemia	20
Intracranial hemorrhage { premature	26
Intracranial hemorrhage { full-term	23
Malformation	14
Asphyxia	41
Acute nephritis	3
Status lymphaticus	1
Fractured 7th cervical vertebra	1
Rupture of liver	3
Hemorrhagic disease	2
General infection	4
Birth pressure	10
Congenital heart disease	1
Placental infarction	1
Unknown	7

Prematurity was a factor in 86 of these cases; in some of them it was the only factor that could be ascertained. Syphilis was a factor in 32 cases, 19 of which were premature infants and 13 full-term children. Bronchopneumonia was the cause of death of twenty cases—9 premature and 11 full-term infants. Toxemia was an influence in the death of twenty children. Intracranial hemorrhage was present in 49, of whom 26 were premature and 23 full-term children. Fourteen cases, or 8.4 per cent, were malformed in some manner. Forty-one of the infants were asphyxiated and showed definite evidence of this in the histologic studies. There were three cases of acute nephritis; one case of status lymphaticus; and one case in which the seventh cervical vertebra was fractured. The liver was ruptured in three cases. Hemorrhagic disease of the newborn was the cause of death in two cases. One case bled to death from an unligated umbilical vein that had been operated on for a large hernia of the cord. Four cases died because of general infection or pyemia. In ten cases excessive birth pressure with consequent trauma was undoubtedly a big factor in the cause of their death. In one case placental infarction was of such an extent that it had a decided influence in the death of the child. Congenital heart disease was found in only one case. In seven cases, after careful weighing of all clinical and pathologic data, no cause could be given for the death of the children.

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POSTMORTEM PATHOLOGY OF THE NEWBORN*

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The studies of the past four years have shown us the need of a most careful examination of the newborn at autopsy. So often the task is delegated to the intern seeking experience in pathology when in reality it should be the problem of one specially trained. The newer conception of pathology requires that more attention should be paid to bacteriology and to the disturbed physiology and chemistry of diseases rather than to depend entirely upon alterations in morphology. These things have led to the development of a new and better method of procedure which I will explain briefly: (1) The autopsy should be performed as soon after death as possible. Every hour that lapses lessens the value of the study. (2) A detailed history of mother, labor, and child should be reviewed in the autopsy room.

The autopsy should consist of: (1) Examination of the exterior of the body, the placenta, and cord. (2) Midline incision from the symphysis menti to the symphysis pubis. (3) Careful examination of the abdominal cavity noting especially the position and size of the kidneys. (4) Exposure of the neck and thoracic organs. (5) Dissection of the vessels and trachea at the base of the neck. (6) Passage of a probe from the mouth to the stomach searching for stenosis or atresia of the esophagus. (7) Ligation of vessels and trachea below the level of the larynx. (8) Removal of the entire visceral mass from the neck to the pelvis. (9) Culture of the heart's blood, trachea, and gastro-intestinal tract after searing the surface in each case. Culture of any other organ

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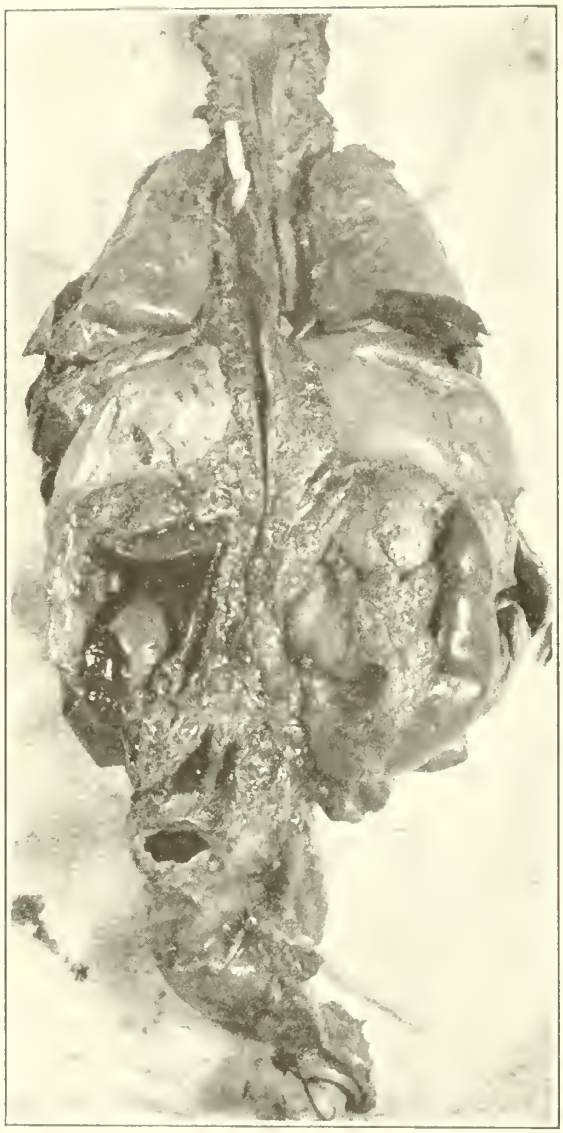

Fig. 1. Posterior aspect of organs after evisceration. Note one pointer is in aortic arc and one is in ductus arteriosus.

indicated in the case should be taken at this time by searing the surface and excision of a small piece with a sterile knife and forceps. (10) Removal of the ligature and a general inspection of the viscera for evidence of malformations, giving special attention to the heart (externally and internally) for evidence of malformation. (11) Dissect the diaphragm from the posterior aspect thus exposing the adrenals, kidneys, and ureters. (12) Remove the thymus and slit the aorta its entire length. (13) Remove the aorta and slit the esophagus to the stomach. (14) Slit the trachea and bronchi as far as possible. (15) Open the duodenum and examine the patency of the bile ducts by forcing bile through the ampulla. (16) Remove, weigh, examine, and section each organ in the manner customary at autopsy. (17) Examine the epiphyses. (18) Examine the brain in the manner following: (a) The scalp is incised in the usual manner. (b) The cranial sutures are severed with scissors. (c) The median suture should be cut on either side of the mid-line to permit the preservation and examination of the falx cerebri. (19) The cranial bones may now be folded back like the petals of a flower, the brain lifted, and the tentorium examined. It is in this region that hemorrhage is most often found. The brain may now be removed in the usual manner.

This report includes only the study of the principal viscera of the cases reviewed clinically in the preceding paper by Dr. Ralph M. Tyson. We believe further study is necessary on the gastro-intestinal tract, central nervous system, and ductless glands. Our bacteriologic studies at this time are too meager for publication.

Thymus

The thymus is not confined to the chest, as is usually taught, but extends beneath the clavicle into the neck for a distance of one and sometimes two centimeters. We have noted that the increase in size of the large thymus is usually in thickness more than in length or breadth. More often it is a matter of quantity change rather than one of quality. An increase in the density of lymphoid tissue does occur. In one such instance the typical thymic picture of status lymphaticus was found together with a generalized lymphoid hyperplasia. The average weight was eleven grams.

Hypoplasia.—An extremely small thymus (under 5 grams) was found in three cases of this series. The organ is always pale and firm and microscopically shows not only a paucity of cells but to some degree an increase in connective tissue. It is significant that a small thymus is apt to be associated with a small spleen and very small, thin adrenals and that nearly all babies, so afflicted, die of infection. In cases of slightly older babies we find athrepsia constantly associated with this combination.

Hemorrhage.—Hemorrhage beneath the capsule and in the parenchyma is found with hemorrhage in other organs as the result of asphyxia or prolonged birth pressure and toxemia in the mother.

Calcification.—This condition was noted in one case accompanied by many malformations and was limited to degenerating corpuscles of Hassel.

Eosinophilia.—Frequently we have observed large numbers of eosinophils in the interlobular trabeculæ. They, with a number of large mononuclear cells, lie in groups in the sheaths of the larger arterioles. Their presence bears no rela-

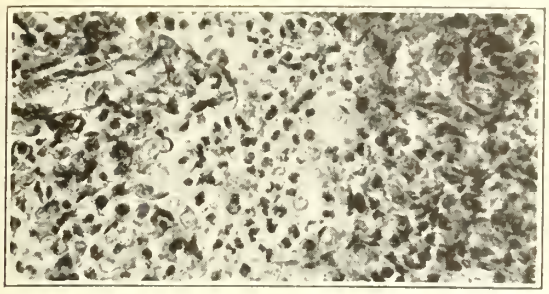

Fig. 2. Pneumonia in a stillborn child.

tion to the size of the organ or the maturity of the child. We interpret their presence as a persistence of the blood-cell-forming function.

Heart

In this series only three cases of cardiac malformation occurred. Two were septal defects. The patent ductus arteriosus and foramen ovale in the newborn cannot be looked upon as abnormal. If the child lives after birth a clot forms in the ductus arteriosus and there develops a process akin to arteriosclerosis which leads eventually to obliteration. The flap of tissue covering the foramen ovale in all of these cases did so completely, although it was possible to pass a probe from the right auricular side beneath the flap into the left auricle. So long as the systemic blood pressure was greater than the pulmonic, this flap acted as a trap valve and prevented the flow of blood through the foramen. Should these pressures be reversed, however, it is possible to understand why there would be a mixture of venous blood with arterial blood. The flap may become adherent at any time to the auricular wall. We have seen, however, the fetal state present in adults at autopsy in whom no symptoms traceable to this condition had been noted.

Other lesions found present no new difficulties. As in the adult we find the subepicardial hemorrhages in asphyxia and in toxemias. Likewise the maternal toxemias or infections in the child cause degenerations and inflammations of the myocardium. One case of suppurative myocarditis was found in a premature child, 41 days old, who had developed pneumonia. Inflammation of the endocardium was not seen.

Lungs

Atelectasis.—This condition in greater or lesser degree is a common finding. In the stillborn it is complete unless artificial respiration has been attempted. I do not believe that one can distinguish between the partial aeration of artificial respiration and that found after the child has made feeble attempts to breathe. Even in those children who have lived a number of days or weeks, areas are seen on the lateral surfaces of the lobes that are depressed and beneath these the lung tissue is unexpanded. In most cases these areas are small.

Emphysema.—In two cases of stillborn babies areas of emphysema were seen. These were probably due to overdistention by the mouth-to-mouth method of artificial respiration.

Congestion, hemorrhage, and edema.—These were found in conjunction with similar processes elsewhere as the result of prolonged labor, asphyxia, toxemia in the mother, and hemorrhagic disease of the newborn. In several instances the congestion was so severe that the condition resembled infarction but microscopic examination failed to reveal thrombosis in any of the vessels. One case of actual infarction was found where there was a defective interventricular septum.

Pneumonia.—There were 17 cases of acute pneumonia. One was in a stillborn child. The origin of this infection could not be determined for the mother was perfectly well. The remaining cases varied in age from three hours to three months. In those under one week we noted that one mother had pyorrhea and one had pyelitis. Nine of these children were premature. In four there was a history of syphilis in the mother. Two were postoperative pneumonias and in one case the mother had an active tuberculosis.

In three cases there was a more chronic process of the interstitial type. The etiologic factor could not be determined. These children lived several days. One case of fibrosis occurred in a syphilitic infant in which the treponema pallidum was found.

Pigmentation.—Brown pigment granules were found in a number of lungs. Some granules responded to the test for iron. They were not always accompanied by hemorrhage, but I believe that such pigment indicates a previous seepage of blood through immature vessels.

Spleen

The size of the spleen varied much. This variation we have found to be caused by varying

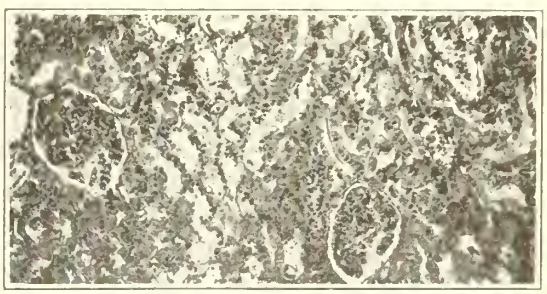

Fig. 3. Normal adult kidney. (For comparison with fetal kidney, fig. 4. Both figures are made on the same scale.)

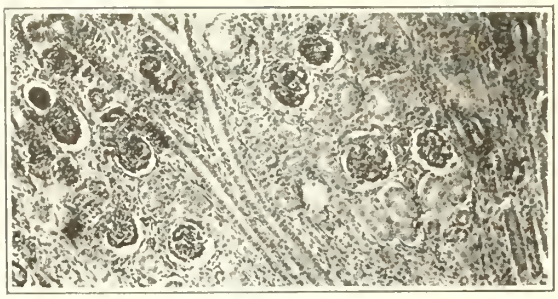

Fig. 4. Fetal kidney 2.

amounts of blood in the organ. In five cases the increase was so great that a gross diagnosis of hyperplasia was made. Upon microscopic examination no distinct cellular hyperplasia was noted but as in the others widely dilated sinusoids or actual interstitial hemorrhage was found. The smallest organ in a full-term child weighed 4 grams and the largest 25 grams.

Congestion.—Congestion was a rather common finding and was associated with this process in other organs as before stated.

Pigmentation.—We have mentioned in the discussion of the lungs the presence of brown pigment granules. Similar granules were found in the spleen.

Adrenals

The adrenal is larger proportionally in the newborn than in the older child. The average weight is from 4 to 6 grams. This weight is from one-fifth to one-half the weight of the kidney. The small adrenal is often associated with a small thymus as we have noted in the description of the latter organ.

Hemorrhage.—This is a common finding and is associated with asphyxia and hemorrhage in other organs, the result of birth pressure or intracranial hemorrhage.

Acute degeneration.—In cases studied during the past year cell alterations were seen which we have called, with hesitation, acute degeneration. The condition was not at all common and we do not believe it is due to postmortem change. The lesion is focal. It is characterized by swelling of the cells and a foamy appearance in the cytoplasm. Later the cells lose their structure much as we see in the adult liver in acute yellow atrophy. Two of these cases were further complicated by acute degeneration of the liver.

Pigmentation.—Iron pigmentation was noted in one case in which the condition was general.

Tumors.—A single case of adenoma was observed. It consisted of a distinctly circumscribed mass of adrenal tissue buried in the cortex of the organ.

Kidneys

Malformations.—Two cases were found in which the kidneys had failed to develop. The developmental defect involved the bladder in both, and in one, the genitalia. One of these babies lived 24 hours. The other was stillborn. Both were associated with other malformations. In one case a solitary pelvic kidney was found. This child, too, showed other malformations such as atresia of the esophagus and duodenum. Hypogenesis was found once. The kidneys were in their normal position but were about half their normal size. Upon microscopic examination scarcely a bit of recognizable tissue could be found. This case was associated with hypoplasia of the thymus.

Development.—Every one knows that the premature child is less able to survive outside the uterus than the full-term baby; that there is born occasionally a child, full-term according to the obstetric history, but actually smaller and less robust than it should be. Such children have been called immature. It is a question how many of the deaths of the first year of life might be due to immaturity in one or a number of the organs. The kidney seems to lend itself especially well to this study. The secretory portion is far from complete development when the full-term child is born. Externally it still shows the lobules of which the kidney is composed in the embryo. A glance at the incised surface will show how relatively narrow the cortex is compared to the pyramids. Microscopically this incomplete development is more in evidence. (See figure 6.) The most superficial glomeruli are small, dense cell masses. They contain very few capillary loops and the epithelium is almost columnar instead of squamous. The deeper into the kidney structure one examines, the more nearly do the glomeruli resemble those of the adult. The tubules, too, are very much shorter and there are fewer convolutions. (See figure 4.) One can observe this by comparing similar fields of a baby's kidney and an adult's kidney. (See figures 3 and 4.) In the same size field and same magnification there will be many more

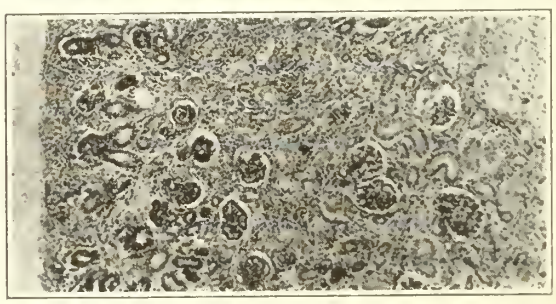

Fig. 5. Fetal kidney 3.

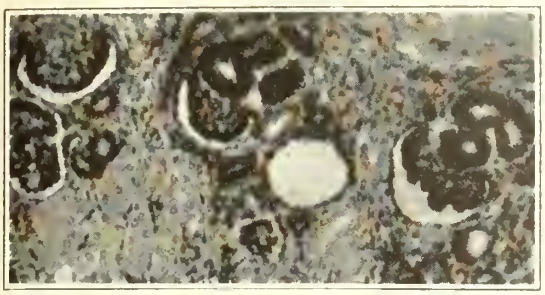

Fig. 6. Fetal kidney 1. Note incomplete development.

glomeruli in the former than in the latter. The increase in size of the organ is not due to the production of more glomeruli and tubules, for this cannot happen after the kidney anlage is formed, but is partially due to increase in size of the glomerulus and mostly to increase in length and convolutions of the tubules. The type of kidney as seen in the newborn is characteristic of the fetus during the eight and nine months of intra-uterine life, and for the sake of classification we have called it fetal kidney 1. (See figure 6.) In the fetus of five, six, and seven months, the superficial glomeruli are still immature. In the earlier period the tubule here is just beginning to envelope the capillary tuft. The older and more nearly completed glomeruli lie nearer the base of the pyramid. The glomeruli lie closer together than before (indicating fewer convolutions of the tubules) and just beneath the capsule there lies a rim of undifferentiated embryonal cells. This type we have called fetal kidney 2. (See figure 4.) Fetal kidney 3 is an exaggeration of the same picture. The method is not entirely accurate but it serves as a guide in the study of this organ. It is more significant to find a type-two or type-three kidney in a child at term than to find a type-one in a child of six months' development. The former certainly faces its environment with an immature kidney. Whether such a kidney can function properly extra-uterine or whether it is more vulnerable are problems for future investigation.

We have noticed in a number of stillborn children that the bladder contains three to four cubic centimeters of fluid; many, however, are empty. No chemical examination has been made. The kidney probably does function before birth but that its action is not vitally important is indicated by the two babies who had passed the seventh month with no kidney structure.

Hemorrhage.—Hemorrhage and congestion were found in a few cases with similar changes in other organs.

Nephritis.—Tubular nephritis (nephrosis) occurred in two cases: one a stillborn monster and one a case of intra-uterine pneumonia, also stillborn. One case of diffuse nephritis occurred in a child 23 days old who died of pneumonia. Two other cases of nephritis were found in this group. The diagnosis was confirmed by autopsies performed by others than ourselves.

Liver

Malformations.—One case of congenital stenosis of the bile ducts and malformation of the gall bladder is included in this group. It was the only malformation found.

Congestion and hemorrhage.—These conditions were found associated with similar processes elsewhere. In one case hemorrhage was the result of rupture.

Acute degeneration.—Acute degeneration and postmortem change in the liver look so much alike that we hesitated to diagnose the former. The term has been used only when the autopsy has been performed in less than 24 hours after death. Unless the body was kept in the refrigerator even this period is too long. Most of these cases showed fatty change. The writer is inclined to look upon this as an evidence of degeneration rather than postmortem change. In six cases the accumulation of fat was marked; we have called these fatty livers. It is believed they, too, are the result of degenerative change in the cell but this is by no means certain.

Focal necrosis.—This was found twice. In one case the mother was eclamptic; in the other, the mother was syphilitic.

Inflammation.—Acute hepatitis occurred in one case. The cause was unknown. There were three cases of chronic hepatitis and four of cirrhosis. The former was distinguished by a more marked inflammatory reaction and the latter by a more extensive fibrosis. Two of the cases of chronic hepatitis were in children whose mothers gave a history of syphilis. A similar history was given in two cases of cirrhosis. In a third there had been toxemia in the mother; and the fourth was due to stenosis of the bile ducts.

Jaundice in the newborn.—Jaundice appearing in the child during the first twenty-four hours of

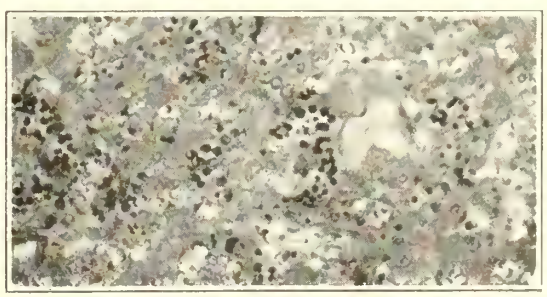

Fig. 7. Erythrogenesis in fetal liver.

life is not uncommon. It is believed that the viscosity of the bile may have some influence in its production, for in many cases it is most difficult to force this thick tarry fluid through the ampulla into the duodenum. In one case where the jaundice was marked, a small particle the size of a grain of wheat and the consistency of a jelly bean occluded the orifice of the ampulla. It consisted of partially inspissated bile.

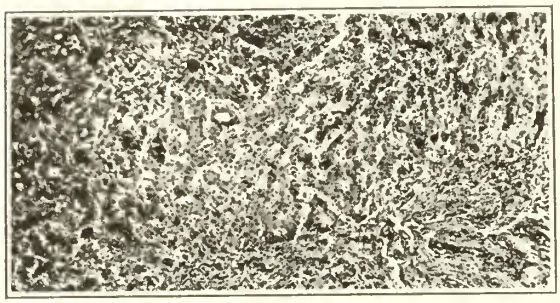

Fig. 8. Cirrhosis of liver (syphilis).

Blood-forming function.—The fetal liver is a seat of blood-cell formation. This function is often retained until term and sometimes longer. Its persistence after the birth of a full-term child may be another indication of immaturity. The condition is recognized by the groups of large and small mononuclear cells, some of which are eosinophilic, lying in the spaces between the liver sinusoids and the capillary endothelium. These cells might easily be mistaken by the inexperienced and looked upon as inflammatory leukocytes.

Malformation

The study of the pathology of the newborn might be approached from another angle—from the standpoint of the various diseases. It is interesting to note that there were 14 malformed babies in this group. In six of them the malformations were multiple. Atresia of the esophagus was found four times. Five mothers were negative to the Wassermann test and two were positive. The remaining seven were not tested.

Toxemia of Pregnancy

Twenty mothers were toxic at some time during pregnancy. In one baby there was no effect apparent either grossly or microscopically. In one there was an acute degeneration of the liver only. Three of these showed acute degeneration of the liver with hemorrhage in other viscera. One case showed focal necrosis of the liver. Placental infarction, pneumonia, maceration, and jaundice, respectively, were the prominent findings in the remaining cases.

Syphilis

There were 32 cases in which the mother's blood was positive to the Wassermann test. There were 19 premature babies. In five cases the child was apparently not harmed. They died either of prematurity or of asphyxia. Certainly there were no morphologic changes caused by syphilis.

We were able to demonstrate the treponema pallidum in only two cases with both the Levaditi method of staining and the dark-field examination of the liver which was carried out in each case.

Conclusions

It has been demonstrated that there is much to be learned by autopsies upon the newborn. The writer feels that his investigations during the past four years have been little more than introductory and that with improvement in technic his further studies may produce such information as will point the way to bringing about a lowered infant mortality.

The author wishes to express his gratitude to Professor P. Brooke Bland for his kind criticisms and valuable suggestions and for permission to study material from the Department of Obstetrics at Jefferson Hospital. He is grateful, also, to Dr. Addinell Hewson for material obtained from the State Anatomical Board.

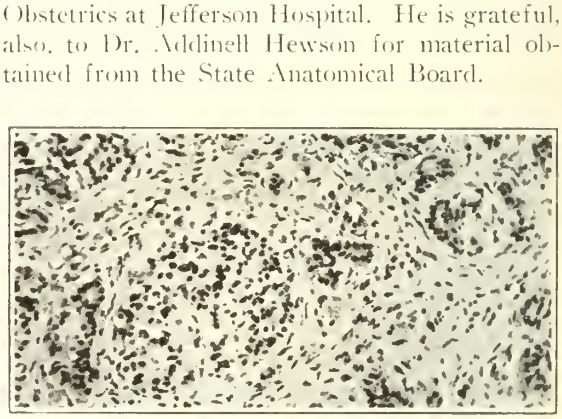

Fig. 9. Cirrhosis of pancreas (syphilis).

ABSTRACT OF DISCUSSION

Of Symposium on the Cause of Death in the Newborn

HARRY LOWENBURG, M.D. (Philadelphia, Pa.): It seems to me that this study is certainly an important contribution and should stimulate pathologists who are connected with a general hospital having a maternity ward. This is a more or less unexplored field and much can be learned.

It would have been a good thing if Dr. Tyson's paper could have been read before a joint meeting of obstetricians, pediatricians, and pathologists. The impression I got from it was that, aside from prematurity, the smallest number of deaths occurred from more or less unpreventable causes. The majority of these

deaths seemed to be from syphilis and from hemorrhage, and syphilis can be prevented to a large extent by proper and inquisitive prenatal care. As far as hemorrhage of the brain is concerned, obstetricians should revise their technic, or be more cautious in their deliveries, because the probability is that many of these cases could be prevented.

John Higgins, M.D. (Sayre, Pa.): I would like to ask whether, in the cases of intracranial hemorrhage, spinal puncture was tried, or if such a procedure would be considered advisable.

Robert K. Rewalt, M.D. (Williamsport, Pa.): As I did not hear the entire paper, I would like to ask Dr. Tyson what clinical evidence other than lumbar puncture he depends upon in the clinical diagnosis of cerebral hemorrhage.

Dr. Tyson (in closing): The primary object of this study has been to reduce, if possible, the number of infant deaths. The information gained by autopsy examination is available to both pediatricians and obstetricians and is usually reviewed at the bimonthly staff meeting.

Intracranial hemorrhage occurs frequently, and many cases make a complete recovery without showing any signs or symptoms. I believe that we are making the diagnosis more frequently than we did a few years ago. The clinical symptoms of intracranial hemorrhage vary greatly, depending on the location and the extent of the hemorrhage. In making a diagnosis one must always take into consideration the length of labor, particularly the second stage, the type of delivery, and the amount of trauma necessary for the birth of the child. It is important also to know about the primary respiration of the child, and particularly whether cyanosis has been present. We feel that intermittent cyanosis is more indicative of intracranial hemorrhage than the continuous cyanosis. In the latter instance we expect to find atelectasis or congenital heart disease. We should consider muscular twitchings of the eyes, face, and extremities, as well as generalized convulsions. It has been my experience that various twitchings do not help to localize brain injury.

The ability of the child to nurse is important. Some of them nurse well, others will cry when put to the breast, and consequently cannot nurse well, while a few cannot be aroused sufficiently. The latter group belong to the lethargic class.

Lumbar or cisternal punctures are helpful in arriving at a diagnosis, but they cannot be depended on as pathognomonic of intracranial hemorrhage. Sometimes we get bloody fluid because of the puncture; again we may get a clear fluid even in the presence of a frank hemorrhage. It is my opinion that a cisternal puncture is easier to make and gives uniformly better results. Many times we fail in making lumbar punctures. The cisternal punctures, however, are not without danger. In one of our cases, we found at autopsy that the medulla had been punctured; however, in this case the puncture was made by an intern without proper instruction.

In some cases excellent results have been secured by repeated drainage of the subarachnoid space; in others, no benefit has been seen. It seems to me that the main benefit of the drainage is the relief of intracranial pressure, and the possible prevention of hydrocephalus.

*Certain Pulmonary Conditions Important in Differential Diagnosis**

SPONTANEOUS PNEUMOTHORAX

WILLIAM T. SHARPLESS, M.D.
WEST CHESTER, PA.

Most writers on this subject have recognized that the above title does not properly describe the condition, as no physical ailment can occur without an antecedent cause. Various other names have been suggested—"idiopathic pneumothorax," "pneumothorax in the apparently healthy," "pneumothorax with insidious onset," "recurring pneumothorax," etc. Julius Hamman, of Baltimore, in the *American Journal of the Medical Sciences*, in his very excellent paper on the subject, describes the condition as "A pneumothorax coming on in apparently healthy individuals without ascribable cause; resulting in no infection of the pleura and therefore unaccompanied by constitutional symptoms and healing rapidly and completely in a few weeks." If to this were added that it is always the result of injury to the pleura, by disease or otherwise, and therefore not a spontaneous but a secondary condition, we would have a fairly complete description of this ailment.

Fussell and Riesman in their paper entitled "Spontaneous Non-Tuberculous Pneumothorax," to which I shall refer later in this paper, and published also in the *American Journal of the Medical Sciences* in 1902, state that while pneumothorax was probably known to the ancients there is very little if anything to be found in the early literature concerning it.

The so-called "Hippocratic Succussion," due to the splashing of fluid in a pleural cavity partly filled by air, is, I believe, not mentioned in the genuine works of Hippocrates. Commentators differ as to what writings of the fifth century B. C. are properly attributable to Hippocrates II or the "Great Hippocrates" as there was more than one medical writer of the name at about that time, and the writings of a whole school of medical authors make up what is known as the *Hippocratic Collection*. The reference to succussion occurs in the chapter entitled "On Diseases" and Dr. Francis Adams, a well-known Scotch commentator and recognized authority on the writings of Hippocrates, in a careful analysis of the subject does not attribute this chapter to Hippocrates. Is it not therefore possible that

*Read before the Section on Medicine of the Medical Society of the State of Pennsylvania, Erie Session, October 1, 1929.

Hippocrates never heard of "Hippocratic Succussion"? It is only fair to state that Dr. Fielding H. Garrison in his *History of Medicine* attributes the recognition of the succussion sound to Hippocrates himself. This, however, has only an academic and historical interest. Hippocrates frequently mentions empyema and includes under this term not only pus in the pleural cavity but abscess of the lung as well.

Fussell and Riesman, before quoted, state that the first to appreciate the condition of pneumothorax was he whom Garrison called the "Pedantic Riolanus," and whom Huxley called a "Tympanitic Philistine" and who, he said in effect, ought to be deflated by a puncture. This refers to Riolan the Second. He is chiefly known as an opponent of Harvey's theory of the circulation of the blood. He was contemporary with Harvey.

Itard of France, an ear specialist, in 1803 gave to the condition the name "pneumothorax" and gave an exact description of it. He recognized it, however, only in the cadaver. It was left for the great Laënnec in 1819 to describe the symptoms accurately and make the diagnosis of the affection in the living subject.

All authorities agree that Zahn in 1891 published in Virchow's *Archives* the first full and satisfactory account of spontaneous pneumothorax which he called "pleural rupture without inflammation."

In 1902, Fussell and Riesman published their paper on "Spontaneous Non-Tuberculous Pneumothorax" and reported fifty-six cases collected from the literature. This report is so exhaustive and so thorough that practically nothing as to the causation, symptomatology, and diagnosis is left for subsequent writers to add.

According to the authorities already quoted 80 to 90 per cent of all cases of pneumothorax are due to tuberculosis and in connection with this disease it is relatively common. It is said to occur in from one to five per cent of all cases of pulmonary tuberculosis.

Of forty-eight cases of pneumothorax reported by Emerson in *Johns Hopkins Hospital Reports,* and referred to by Osler and McCrae, twenty-two, or less than half, were tuberculous; six were the result of trauma; ten, of aspiration; two were spontaneous; two followed bronchiectasis; two, abscess of the lung; one, gangrene; two, empyema; and one, abscess of the liver perforating through the diaphragm. Osler also states that of the ten cases due to aspiration and presumably not tuberculous, as he does not class them in the tuberculous cases, five died. He does not state that death was due to the puncture. It may have been due to the cause producing an effusion, but if this was the correct cause of death we must consider paracentesis thoracis a procedure to be performed advisedly.

Pneumothorax of the kind we are describing is quite infrequent, though in 1928 at least six articles appeared in the medical journals of this country and in most of these articles one or more cases were reported.

The case which forms the basis of this article is that of a lad, seventeen years of age. He was unusually tall for his age, being six feet two inches, well-developed muscularly, and excelling in athletic sports at school. His age and sex agree with the general observation that most of these cases occur in young males. He had grown up on a farm and under wholesome surroundings. There is nothing in his previous history that has any bearing on the case, except a very stubborn cough in 1924 which persisted for several weeks. Since then he had been well. The evening before his attack he had played basket ball, but had not used unusual effort. On the morning of his attack he felt dull, tired, and not in his usual buoyant health. He went to school, however, which involved a short ride on the railroad, and a walk of about two miles. While sitting at his desk he sneezed. This was not a cataclysmal sternutation but a restrained and moderate seizure. He was immediately seized with a severe, sharp pain in the upper part of the right lung. He said that it felt as if something had bursted in his chest which, indeed, had occurred. The pain soon spread over the whole chest, and was so severe as to prevent motion. After a short rest he improved enough to go to his home, which he did with great difficulty, stopping at short intervals to recover his breath. When seen soon afterward he was exhausted, dyspneic, cyanotic, nervous, frightened, with a subnormal temperature, a feeble pulse of 130, and an annoying and painful dry cough.

The suddenness and severity of the symptoms in the form of pneumothorax under consideration depend entirely upon the size of the communication between the bronchus and the pleural cavity. If the communication is large, the pleural cavity fills rapidly—the lung collapses suddenly and there is a great disturbance of the respiration and of the action of the heart until the latter organ can accommodate itself in a measure to the altered condition. If, on the other hand, the communication is small and the air leaks slowly into the pleural cavity, the symptoms come on very gradually, allowing the heart time to adjust itself to the change, and the collapse described in the case mentioned does not occur. Indeed it has been suggested that the condition may occur so gradually, the leak be

closed, and the air reabsorbed without being recognized or much inconvenience experienced by the patient. Sometimes the air in the pleural cavity is under pressure greater than the pressure of the atmospheric air. This can be accounted for only by assuming that the opening acts as a valve permitting the entrance of air but not its exit.

What causes this perforation of the visceral layer of the pleura? So far as the literature shows, very few cases of this kind have come to necropsy and the morbid anatomy of the condition is often a matter of inference and conjecture. When the communication is small, it is suggested that it is due to the rupture of an emphysematous bleb on the surface of the lung. Against this theory is the fact that most of these cases occur in the young, at which time of life emphysema is not common. This is the theory, however, accepted by Fussell and Riesman as explaining most cases.

It has also been suggested, and this seems the more plausible theory, that there has been an antecedent pleurisy, possibly unrecognized, which has caused an adhesion between the two layers of the pleura and some unusual strain upon the adhesion (sneezing in the case reported) has torn the visceral layer of the pleura off the lung, and opened a communication with a bronchus. This is the possible explanation of those cases like the ones reported in which the symptoms are sudden and violent. There is some objection to this theory, also, as many of these cases have occurred when the patient is at rest and when there is no history of recent violent exertion. In fact some cases have occurred when the patient is asleep. In the case I have described there is no history either of a pleurisy or an emphysema.

When the patient was first seen his condition was such that a thorough examination could not be made. He was given an opiate for his pain, agitation, and cough, and later in the day his temperature was reported to be 99.5°. It did not get above this point at any time during the attack. The next day his pulse was 96 and his condition much improved. Examination showed a higher pitched note on the right than on the left side, but not a great difference. In some cases dullness on percussion has been reported, because, it is stated, the air in the pleural cavity is under tension, and has led at times to a diagnosis of pleural effusion. This mistake easily occurs, as besides this dullness there is absence of breath sounds and of the transmitted voice; other physical signs should, however, correct this mistake. Breath sounds were very distant and respiratory movements almost absent on the right and increased on the left side. Vocal resonance and fremitus were absent on the right side. The apex beat of the heart was one inch outside the mid-clavicular line. There was hyperresonance under the sternum continuous with that of the right lung. The heart was regular, the rate 96, and the sounds clear. Liver dullness was lower than normal, and not recognizable above the costal margin. On listening to the right lung, a slight metallic tinkle was heard. This has been noted in other cases mentioned in the literature and is ascribed to air or fluid passing through the opening between the bronchus and the pleural cavity. The coin test, obtained by striking some metallic object as a coin laid on the front of the chest with another coin and listening on the back of the chest, produced very clearly the "cathedral-gong" sound. This sound, however, could not be elicited after the first examination.

The diagnosis of pneumothorax is usually easy except in those cases that come on very gradually as mentioned above. The differential diagnosis between pleural effusion and pneumothorax has been referred to. The diagnosis from massive collapse of the lung due to the occlusion of a bronchus may present some difficulties; but if we bear in mind that in pneumothorax the heart and the tissues of the mediastinum are pushed *away from* the affected side, by the pressure of air and by the traction of the elastic tissue of the healthy lung, and in collapse of the lung they are drawn or pushed *toward* the affected side, as Dr. Bowen has shown in his recent very thorough study of collapse of the lung published in the *American Journal of Roentgenology,* the matter should be cleared up. Pneumothorax may also be mistaken for diaphragmatic hernia, tumor of the lung, and emphysema.

Because of the patient's condition and because he was some miles from a hospital, no x-ray study was made for four days after the onset of the attack. When this was done it was found that the heart and tissues of the mediastinum were pushed about three fourths of an inch to the left of the normal position. The right side of the diaphragm was pushed downward until it was lower than the left. There was no fluid in the pleural cavity and the right lung was a collapsed mass about the size of a man's fist and lying close to the spinal column. The left lung was normal. After about a week it became possible to recognize breath sounds at the base of the lung. Some authorities state that the upper part of the lung expands first. If we may judge from the location of the initial pain, the perforation was in the upper part of the chest. This may possibly account for the expanding of the lower part of the lung first.

When it seemed likely that the rupture had healed, he was placed on the left or sound side and made to blow through a series of Wolf bottles to aid in the expansion of the lung. Probably this was of very little use as a lung cannot expand until the air in the chest is removed by being absorbed into the circulation or by aspiration. It is remarkable how rapidly this occurs considering the amount of air that must be absorbed. It has been proposed to introduce a needle into the affected side so as to assist in removing the air and in some cases this has been done apparently with good effect.

It was interesting to note the way in which the lung expanded,—each succeeding day showing a higher level of normal breath sounds until all of the physical signs were normal over the whole lung. A second x-ray picture was taken four weeks after the first and both lungs were found normal in position and appearance, and the displaced tissues and organs had resumed their normal position. There has been no recurrence of the condition and the patient seems well.

The prognosis in this form of pneumothorax is good. Some cases have been reported in which tuberculosis developed later and in a few cases the condition has recurred some times at a considerable time after the original attack. Hamman has reported cases with several recurrences—mostly on the side first affected but in some cases it has returned on the other side. There was a case recently reported in the *British Medical Journal* in which there was a spontaneous pneumothorax occurring synchronously in both lungs. The time of recovery varies from a few days or weeks to several months. One case is reported by Whiting, and quoted by Fussell and Riesman, in which the recovery was delayed for nine years. Another case lasted for five years but complete recovery finally occurred. The condition being mechanical there is no treatment that has any effect either on the closure of the opening in the pleura or on the absorption of the air in the pleural cavity. Aspiration of the air has been practiced in several instances. The treatment, therefore, is by rest and the administration of opiates for pain. Time is the great healer in this as in most other acute conditions.

The references to the medical literature on this condition have been collected for me by Dr. Ralph C. Bradley, an intern in the Chester County Hospital. These references will be furnished if desired.

100 S. Church Street.

A MAJOR HAZARD IN THE DIAGNOSIS OF PNEUMONIA

Acute Massive Collapse of the Lung

DAVID R. BOWEN, M.D.
PHILADELPHIA, PA.

In a previous paper[1] I have made a rather exhaustive review of this topic which will serve as a starting point, at least, for those who wish to study the subject broadly.

In this paper I hope to establish the entity of this condition, to describe it elementarily for the many who have hitherto failed to grasp its significance, and to demonstrate the frequent usefulness of this knowledge.

Acute massive collapse of the lung is that condition of lung airlessness caused by circulatory absorption of air from all lung parts distal to a totally obstructed bronchus. When the condition complicates postoperative or posttraumatic states or acute illness, this obstruction is always, or nearly always, a plug of more or less inspissated or fibrinous mucus. In other conditions the obstruction may be anything from a foreign body to occlusion by the presence of a neoplasm, an aneurysm, or what not. The condition bears no relation to pneumothorax.

History

I am not exploiting a new idea. Stokes,[2] of Dublin, knew the salient features in 1837. Mendelssohn[3] in 1845 and Traube[4] in 1846 demonstrated it in competent research. In the early fifties West,[5] Willshire,[6] and Gairdner,[7] especially the latter, in England, did work which you and I cannot afford to ignore today. During this period Meigs[8] of Philadelphia and Foster[9] of New York ably placed the matter before American physicians. West's book, too, was popular enough to appear in six American editions. Lichtheim's[10] research in 1879 is a masterpiece. All this and much other admirable effort failed utterly to win any general notice. No textbook or other general medical treatise gave it worthy space and scarcely a half dozen have mentioned it at all. It is no exaggeration to include, at least, the year 1928 in this statement.

It fell to William Pasteur,[11] London, to revive the subject in a series of unusually painstaking clinical studies in 1908-11. Even this would, I am persuaded, have been as seed on stony ground but for the persistent, and wholly unpublished, demonstration of the condition by Pasteur, as a member of the British Medical Service during the Great War. Its first publishing in America was by Scrimger,[12] of Montreal, in 1921. Since that date approximately fifty American papers have been published.

Diagnosis

This discussion must omit all but the differential diagnosis between massive collapse and pneumonia and this diagnosis is always imperative in any complicating lung affection which, superficially, appears to be pneumonia. The onset in both is sudden. This, with the characteristic posture of the patient, protecting the affected side, the brick color suffusion of the face, the anxious expression, the initial dyspnea, all announce, loudly, that the patient has pneumonia. It is this striking similarity of the prominent signs—indeed, I am almost ready to say identity of these signs—which has made the diagnosis so difficult and the demonstrations by the long line of masters so ineffective.

How, then, can we tell the two apart? First, there is in massive collapse frequently a premonitory moderate rise in temperature, with a proportionate rise in pulse rate. Rarely, if ever, is the pulse rate more than proportionate; it is frequently less. This premonitory temperature rise is probably due to the disturbance of the pulmonary factor in heat regulation rather than to any other cause. We need to halt here a moment to refresh our thought as to the importance in heat regulation of the normal evaporation of pulmonary secretions. From the moment that obstruction of a considerable bronchial branch is complete, disturbance of temperature and pulse rate is more marked; but rarely, if ever, do we find in massive collapse that rapidity of pulse which is a feature in pneumonia. Any temperature rise in a postoperative or posttraumatic patient, after the first equilibrium is established, should prompt an immediate search for lung involvement, especially that of massive collapse. In a way the same may be said of similar incidents in the course of exanthemata and other conditions. Failure to consider the possibility that the patient has collapse, atelectasis, in the above conditions is to risk largely a gross error in diagnosis.

The outstanding sign, however, is a significant displacement of the heart toward the involved side. This may be fairly easy or very difficult to recognize. Experience will be a large factor here. It is, undoubtedly, more easily recognized by the fluoroscope than by any other physical sign. We are, furthermore, confronted by the fact that massive collapse may frequently complicate true pneumonia. Indeed, there are many adherents to the belief that lobar pneumonia is massive collapse in a patient infected with the pneumococcus. Wherein, then, is all the need for distinction? Why not follow along comfortably the eighty and more years of precedent and call them all pneumonia? Wherein is there any serious wrong? The answer is that acute massive collapse of the lung occurs much more frequently as a complication than has been recognized; that true complicating pneumonia, especially postoperative pneumonia, occurs much less frequently than has been believed; that these complications have been promptly labeled pneumonia and careful, differential study has seemed unnecessary; and, finally, that collapse is, in many cases, easily relieved, leaving the patient as before with only his major complaint or injury, while true complicating pneumonia is always a challenge to all that is art and all that is science in modern therapy.

The mechanism of heart displacement appears to so many physicians still as an unbelievable thing, that attention must be given to it here. Rapidly after a total bronchial obstruction, the collapse is completed. This takes, at most, a few hours. Without compensation, we have then a very small, airless lung on one side and an almost doubly emphysematous opposite lung, with a very elastic mediastinal wall between. In theory the limit of displacement may be the external thoracic wall of the involved side. Practically, however, compensation is always present and more or less efficiently produced by the following five factors:

First.—Congestion of pulmonary vessels by precisely the mechanism of the "dry cup." The collapsed lung has blood and lymph channels which are highly elastic, and a plentiful supply of blood and lymph is at hand to fill them in such an emergency. Perhaps this is the largest factor.

Second.—Increased intrabronchial and intravesicular secretions. This factor, so important in bronchial occlusion from foreign body that "drowned lung" is no misnomer, is probably the least important factor.

Third and fourth.—Depression of intercostal muscles and elevation and fixation of the diaphragm. Both of these are often visually demonstrable in thin patients.

Fifth.—But, with all this, compensation makes a large demand upon the movable mediastinum; and to just the degree which vascular engorgement and intrapulmonary secretion fail to compensate for lung contracture, the other factors will come into play. Whether the mediastinum is pulled toward the involved lung by the potential vacuum, or pushed toward it by compensatory emphysema, is a mere play with words. Now, of course, this displacement will be greatest when the emphysema is greatest—on inspiration—and least on expiration. Therefore, the displacement toward the affected lung will increase with inspiration and decrease with expira-

tion. Fluoroscopically the resulting lateral excursion, wholly abnormal, may be spectacular. It may also be so slight as to be detected only by skillful artifice. The greater this excursion the less complicated is the collapse and the greater the probability of prompt response to therapy.

TREATMENT—PROPHYLAXIS

A great etiologic factor is fixed and faulty posture. Rarely is there contraindication to frequent corrective change of position. This is much more important if bronchitis is known to be present or if the patient had a profuse discharge of mucus during anesthesia.

Morphin and atropin, at least for postoperative administration, are contraindicated. Because they quiet the cough reflex and decrease the secretion, both are undesirable, to say the least. If used singly or together, their potential danger as an etiologic factor must be considered and extra vigilance exercised.

Drug therapy offers little. The iodids and some expectorants may be considered if prompt relief has not been secured.

The method of Sante,[13] by which the patient is rolled on to the uninvolved side and then forcibly shaken, or even slapped over the involved area, has been rather widely mentioned. In a number of reported cases from varied sources relief has been prompt and lasting. In the writer's observation aspiration of the mucous plug by skillful bronchoscopy[14] has appeared more accurate and efficient. Thanks to the skill of Dr. Jackson as a teacher, skillful bronchoscopy is now obtainable over a wide range of territory.

Cases which do not yield to one of these physical methods or which do not expel the plug spontaneously will have prolonged recovery, and a few will be left with permanent lung impairment.

The patient who, in his first one hundred postoperative hours, develops a lung complication does not, in the very greatest probability, have postoperative pneumonia. The physician should think of collapse.[15]

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FRIEDLÄNDER'S PNEUMONIA

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Friedländer's pneumonia is due to the organism first described by Friedländer in 1882 and known as the Friedländer bacillus or the *Bacillus mucosus capsulatus.* This form of pneumonia is probably more common than is generally recognized. Its incidence has been variously placed as between five and ten per cent of all cases of pneumonia. Clinically, this disease is of importance for three reasons: first, because of its extreme virulence, death occurring in the majority of cases; second, because in the cases that recover convalescence is quite protracted, several months elapsing before recovery is complete; third, because there are usually permanent lung changes which give rise to clinical symptoms and roentgenologic findings that may closely simulate tuberculosis.

There is, in this disease, no typical clinical course as in true lobar pneumonia. The onset may be acute as in lobar pneumonia, or insidious as in bronchopneumonia. There are certain characteristic features, however, which serve to differentiate it from other forms of pneumonia. Thus Friedländer's pneumonia is distinctly a disease of the latter years of adult life, seldom occurring before forty years of age. The temperature and leukocyte count are rarely as high as in pneumococcic pneumonias. The average temperature is about 102°F., and the leukocyte count ranges between 12,000 and 15,000. There is always an abundance of viscid, mucoid sputum which is usually blood streaked. Cyanosis and prostration, when present, are likely to be extreme.

While these clinical findings are suggestive of Friedländer's pneumonia, they do not in themselves warrant the diagnosis. A positive blood culture, while highly desirable from the stand-

point of diagnosis, is frequently not obtainable. In the sputum, however, the Friedländer bacillus can be found in large numbers and in cultures from the sputum these outgrow all other organisms. This usually suffices to establish the diagnosis. One further diagnostic aid of value is to be had in the form of the roentgen examination.

The roentgenologic appearance is quite characteristic and the various pathologic stages of the disease can readily be followed by serial roentgenography. Thus, the initial pathologic process is a bronchopneumonia. Roentgenologically, this does not differ from bronchopneumonias due to other organisms. This initial stage of the disease is of short duration. The bronchopneumonic patches soon coalesce to form larger areas of consolidation which clinically give the physical signs of lobar pneumonia. On the roentgenogram, however, it is to be noted that these consolidations occupy the peripheral portions of the lung and do not have a true lobar distribution. For this reason this stage of the disease is spoken of as the pseudolobar stage. Within a few days to a week, as a rule, these pseudolobar areas disintegrate to form multiple abscesses and cavities. Pathologically and roentgenologically, this is the most characteristic feature of the disease. With the development of multiple abscesses death usually occurs. In the cases in which the onset has been of an insidious nature and in which the symptoms are of less severity, recovery is more likely to occur. In such cases during a period of weeks or months the symptoms gradually subside but rarely disappear entirely. A roentgen examination at this time will show that the multiple abscesses and cavities have become the seat of an extensive fibrosis which is probably more or less permanent. In a case recently studied, however, the patient, several months after recovery, was entirely symptom-free and the roentgenogram showed no fibrosis and no evidence whatever of the former Friedländer infection. This case is probably the exception rather than the rule.

On the basis of the pathology and the correlated roentgenologic findings the disease has been divided into four stages: (1) The initial stage of bronchopneumonia. (2) The stage of pseudolobar pneumonia. (3) The stage of multiple abscess and cavity formation. (4) The healing stage or stage of fibrosis.

The cases which form the basis of this paper have been reported previously.[1-2] The following will illustrate a typical case of Friedländer's pneumonia.

Case 1.—J. A., Italian, aged 50, was admitted to the service of Dr. Alfred Stengel, University Hospital, in diabetic coma. During the week before admission, he had spat up some dark red blood which he believed came from the mouth. Physical examination of the chest, on admission, showed it to be emphysematous in type but apparently clear. The diagnosis was severe diabetic acidosis probably partially induced by some infection. Large doses of insulin were necessary to control the sugar level. Eight days after admission, facial cyanosis was distinct, and the patient complained of pain in the right side of the chest. Numerous frictions were heard in the right anterior axillary line at the level of the fourth rib. Posteriorly over the right lower lobe the percussion note was impaired and the breath sounds suppressed. It was thought that the patient probably had a low-grade bronchopneumonia. A roentgenogram of the chest (figure 1), taken the following day, was reported as suggesting a resolving pneumonia of the entire right lung.

Fig. 1. Friedländer's pneumonia (second day of disease). The transition from the primary stage of bronchopneumonia to the second stage of pseudolobar pneumonia.

For the following fourteen days, the general condition of the patient improved slightly. Fever continued, the temperature going as high as 100°F. The physical signs in the chest came to involve a slightly greater area. X-ray examination at this time (figure 2) showed that the pneumonic process had condensed into areas assuming a pseudolobar appearance. By this time, Friedländer bacilli began to appear in the sputum, in large numbers both on smear and on culture. At this time the temperature varied between 99° and 101°F. The blood culture was entirely negative. Pneumococci or acid-fast organisms were not found on repeated examinations.

Thirty-two days after admission, the physical signs in the right side of the chest remained practically unchanged, but x-ray examination (figure 3) at this time showed multiple cavitation throughout the entire right lung. The sputum continued to show Friedländer's organisms in large numbers. From this time on there was no fever, although the improvement in the general condition of the patient was slight and extremely gradual. The physical and x-ray signs in the chest remained much the same except that the roentgenogram (figure 4) showed that the cavities in the right lung were

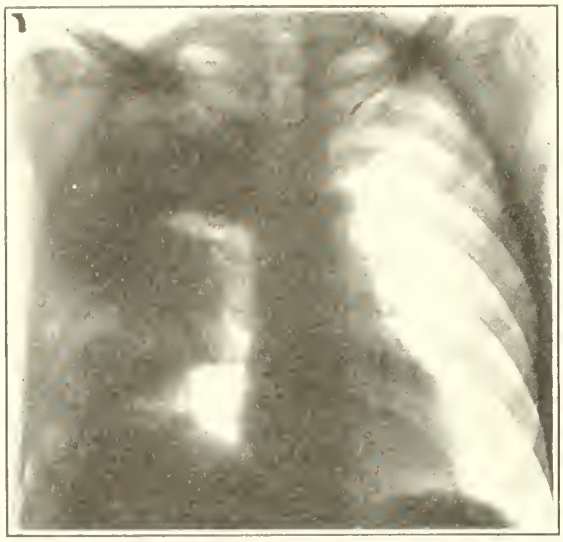

Fig. 2. The pseudolobar stage (fourteen days later).

Fig. 4. The stage of fibrosis. Roentgenogram made at the time of the patient's discharge from the hospital (about three months after the onset of the disease).

draining well. Friedländer's organisms continued to appear in the sputum. The patient now steadily improved and the diabetic situation was controlled in a satisfactory manner. He was discharged from the hospital 102 days after admission.

After he left the hospital, his general condition was good. Six months later he was admitted to the University Hospital, again for diabetic acidosis. On this admission, as on the previous one, he gave the history of having spat up blood a few days before admission. The diabetes was controlled more easily on this occasion. The striking aspect concerning the chest was that physical signs still remained over the right lung, and the roentgenogram (figure 5) showed a diffuse scarring with lines marking the walls of the former abscess cavities.

Recovery from an attack of Friedländer's pneumonia is followed in many instances by a chronic Friedländer infection of the lung which in its clinical manifestations closely resemble tuberculosis. These patients are likely to be underweight and complain of general weakness and ready fatigue. They have frequent attacks of so-called "grippe" during which the expectoration of blood-tinged sputum is a common occurrence. In spite of the fact that the sputum examinations are persistently negative for tubercle bacilli, these patients are usually treated for tuberculosis, as occurred in one of our patients who had had a chronic Friedländer infection for twenty years during which time he had been diagnosed as tuberculous and treated at a sanatorium on several occasions. The roentgen examination when correlated with the clinical history will in the majority of instances serve to differentiate these chronic Friedländer infections from tuberculosis. A bacteriologic study of the sputum is

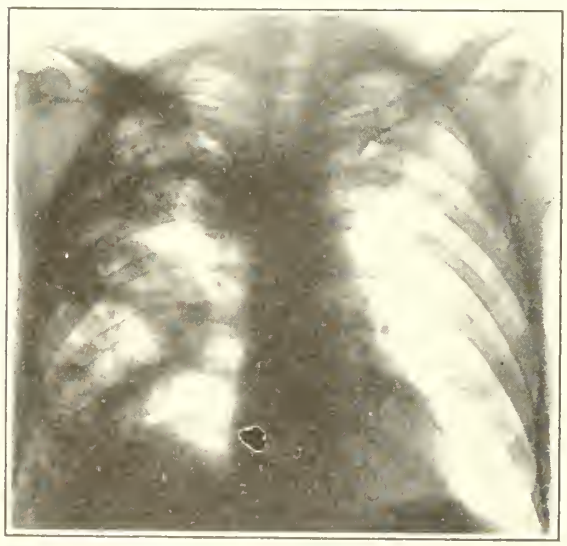

Fig. 3. The stage of multiple abscesses and cavity formation (thirty-second day of the disease).

Fig. 5. Chronic stage, showing extensive fibrosis of the right lung ten and one-half months after the onset of the pneumonia.

indicated in such cases and the Friedländer bacillus is usually found in large numbers many years after the original infection.

Thus it would seem that the suggestion made by Belk[3] to examine so-called tuberculous patients, in whom the tubercle bacillus cannot be found, for the Friedländer bacillus is indeed worth while.

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ABSTRACT OF DISCUSSION

Of Symposium on Certain Pulmonary Conditions Important in Differential Diagnosis

Milton Goldsmith, M.D. (Pittsburgh, Pa.): Teachers of medicine have emphasized for many years the necessity of thorough examination in all cases with persistent cough. This was made necessary because of the failure to recognize many cases of tuberculosis until the disease was far advanced. With increased interest in the subject and greater skill on the part of the general practitioner, pulmonary tuberculosis is now diagnosed much earlier, on the average, than during any previous era in medicine. As in all movements where enthusiasm is high, the pendulum may swing to the other extreme and the diagnosis occasionally may be made where no tuberculosis exists. All sanatoria record a rather high percentage of patients sent to them in whom they are unable to confirm the diagnosis of tuberculosis. The conditions so mistakenly diagnosed are many, chronic lung abscess and mitral stenosis being among the most prominent.

Dr. Kornblum brings to our attention another probable source of error. As described in his paper, the physical signs may be very misleading. In the early stages we may have the same dullness, bronchial breathing, and increased fremitus that are characteristic of pneumonia. Should the patient reach a chronic stage, signs of fibrosis and cavity formation appear. Reliance must be placed upon x-ray evidence and sputum examination. It is the exceptional tuberculous case which fails to give a positive sputum on repeated examination, though I have followed one case for six years in which there were progressive physical and x-ray findings before tubercle bacilli were finally discovered. When a suspected case gives a repeatedly negative sputum the possibility of some other form of infection must be thought of and, particularly since this contribution of Dr. Kornblum's, the Friedländer bacillus must be considered. These cases are no doubt relatively rare, but when search for them becomes part of our routine they will probably be found much more frequently than we now suspect.

Dr. Sharpless has explained to us that there probably is no such thing as spontaneous pneumothorax, and the fact that a pneumothorax occurs should be taken as evidence of some abnormal antecedent condition.

Even though eighty to ninety per cent of all cases of pneumothorax are due to tuberculosis, the condition is relatively rare, as but a very small percentage (1 to 5) of tuberculous patients develop pneumothorax. Where tuberculosis can be reasonably excluded the cause is usually some other frank disease of the chest, as empyema, bronchiectasis, abscess, or trauma. It is in the small number of cases in which none of these conditions can be held responsible that the term "spontaneous" may be justified.

As in the case so well described by Dr. Sharpless, most of these patients are young males. The diagnosis is usually easy if one but thinks of the condition. There is the picture of acute respiratory distress, with fixation of one side of the chest. These signs, with hyperresonance, absent breath sounds and fremitus, and displacement of the heart towards the opposite side constitute a syndrome not duplicated in any other chest condition. The coin test and metallic tinkle are confirmatory, though the latter is not always present. The x-ray is of great value in bringing out the details of the pathology, but in most cases the diagnosis should be made without it. This statement applies to the case presented, in which Dr. Sharpless made the diagnosis by the physical signs.

A recent experience, however, leads me to believe that there are some cases so slight in the degree of injury that failure to recognize them by ordinary methods is fairly excusable. A man, aged 27, previously healthy, while walking in the street, was suddenly seized with pain in the left pectoral, shoulder, and scapular regions. The pain was aggravated by breathing and change of position. There was no cough, dyspnea, or interference with sleep. He remained in bed at home for three days, without obtaining any relief, and then came to my office. His face was somewhat flushed and his pulse was moderately rapid, but otherwise he did not appear very ill. His temperature was 99⅗° F.; the white count was 13,700, with sixty-six per cent polymorphonuclears. A cursory examination of the chest failed to reveal anything unusual. Under the fluoroscope the left chest showed an extremely small effusion, filling the diaphragmatic angle and forming a thin film over the upper surface of the diaphragm. During this examination a few bubbles were seen to rise through the fluid.

The patient was sent to the hospital and when examined radiologically a few days later the effusion had entirely disappeared. There was the slightest haziness of both apices, a few apparently calcified glands in the left hilus, and one in the center of the left lung field, just above the diaphragm. When the examination was repeated three weeks later these hilus glands had almost disappeared, although the one above the diaphragm was as prominent as when first noted. I have reports from his family that he has remained perfectly well during the ten months since this experience.

It is my impression that this man had a minute rupture of the lung, probably near the base, with absorption of the extravasated air during the three days before my examination was made, which revealed the resultant extremely small hydrothorax.

Dr. Bowen has presented one of the most spectacular subjects of modern medicine. In his previous work and in this paper he has gone into the subject most exhaustively. In fact, in the present state of our knowledge, we might say he has expressed the last word. After listening to such an authority as Dr. Bowen it would be presumptuous for me to offer any criticism, or to refer to any of the conflicting theories not already mentioned by him. I shall try to emphasize what to me seem the most important points in the paper.

While massive collapse is a rediscovered condition, it occurs much more frequently than is generally ap-

preciated. Lung complications occur postoperatively in the ratio of one in 30 to 50 cases (Cutler), and of these seventy per cent are atelectasis. Among those who are keenly on the lookout for collapse it is relatively common.

The general impression seems to be that it occurs purely as a postoperative complication, but the probabilities are that it occurs more frequently in nonsurgical conditions, among which diphtheria, tuberculosis, and pneumonia are the most prominent. Clinically, however, most of the cases diagnosed so far have followed operations or trauma. It appears probable that many so-called postoperative pneumonias are really cases of massive atelectasis. Dr. Bowen goes so far as to suggest that what we call bronchopneumonia is a bronchitis with areas of partial collapse, the collapsed areas being infected with organisms less virulent than the pneumococcus. If this is true, it is easy to accept the theory of Lee and Tucker that postoperative bronchopneumonia is caused by the arrest, in these small areas of collapse, of the minute emboli coming from the field of operation. The mechanism, at least the one largely accepted, is that of occlusion of a bronchus, usually by a plug of mucus, followed by absorption of the air in that part of the lung supplied by this bronchus. This condition has been reproduced experimentally and the theory has been verified clinically, as we have just been told, by relieving patients of this type by aspirating the obstructing material through the bronchoscope.

The symptoms, in severe cases, usually develop abruptly, but are preceded by a short period of moderate fever. Then the catastrophe, so-called, occurs, characterized by an anxious expression, dyspnea, cyanosis, sweating, and the sensation of tightness, rather than pain, in the chest. The cyanosis is usually described as brick-red. The physical signs vary with the extent and depth below the surface of the parts involved. There may be dullness, absent or increased breath sounds, and various râles. The picture certainly is suggestive of pneumonia, but if one keeps in mind the possibility of collapse in such cases the correct diagnosis can probably be made fairly frequently with the ordinary methods of examination.

These patients assume a characteristic position. They do not lie flat in bed, as many pneumonia victims do, but contract the thorax on the affected side, so that the shoulder is depressed toward the hip, while the opposite shoulder is raised. The diaphragm is fixed; the interspaces are narrowed and depressed. Vocal and tactile fremitus are greatly lessened, which is contrary to the usual finding in pneumonia. If the apex of the heart can be located, it will be displaced toward the affected side. This sign, if it can be demonstrated, almost completes the diagnosis. In pneumothorax and pleural effusion the heart is pushed to the opposite side.

The x-ray is, of course, the final word in diagnosis but if, as we were told, we learn to "think atelectasis" we may in time recognize some of these cases and have the diagnosis merely confirmed by the x-ray. Dr. Bowen has shown us the characteristic x-ray findings.

If one could sum up the lesson to be learned from these three papers we might say: "Think Friedländer bacillus," "think pneumothorax," and "think atelectasis."

C. HOWARD MARCY, M.D. (Pittsburgh, Pa.): The thing that impresses me in the study of these pulmonary conditions is that there is very little reason why we cannot make a thorough study of any chronic infection of the lungs. We can at least make a thorough physical examination, and there is no reason why we cannot have sputum examinations and studies of the blood. There may be instances in which it is not possible to have x-ray studies, but with the information we can secure from a careful physical examination and the simple laboratory tests we can arrive at a fairly definite idea of the type of pathology with which we are dealing. On the other hand, with the x-ray available there is a tendency to swing to the other side.

It may be that we are getting lazy in our clinical diagnosis and laboratory studies. Too frequently patients are sent for x-ray study without adequate clinical study and tests, and in this way we miss some of the things which are extremely important in leading to a diagnosis. We find very frequently patients coming into the hospital with a diagnosis of pulmonary tuberculosis when a little more careful study reveals that we are dealing with nontuberculous infections. Sometimes the treatment indicated may be very similar to what we would wish to carry out for tuberculosis. In other instances this treatment is entirely contraindicated, and the patient has lost a good deal of time because of the erroneous diagnosis.

I think if we take the reasoning from these papers, that the chronic lung infections in particular, as a rule, are not emergency cases, with perhaps the exception of the spontaneous pneumothorax Dr. Sharpless spoke of, we will realize that we have time to study these patients. I am sure we can cut down their period of illness by taking a little more time and making a careful diagnosis, utilizing the things we know will help in the way of laboratory procedures, and the x-ray when necessary.

I. HOPE ALEXANDER, M.D. (Pittsburgh, Pa.): We are agreed that tuberculosis is the most frequent cause of spontaneous pneumothorax. To hear some authorities speak, one would think that tuberculosis is very easy to diagnose, but this is not always true. I am sure that many of the patients we see with spontaneous pneumothorax, and in whom we are not able to make a clinical diagnosis of pulmonary tuberculosis, have this condition in a large percentage of cases. During the war, in the Army Hospital at Oteen, N. C., I observed many of these patients. In every case a diagnosis of active pulmonary tuberculosis had been made by an experienced physician, but after prolonged, careful study, we found that only fifty-one per cent actually had tuberculosis.

In my experience with nine cases of spontaneous pneumothorax, three cases occurred in patients convalescing from flu; one case occurred during the course of typhoid fever, and the other five were cases in which we never made any diagnosis as to the cause of their pneumothorax. I believe that these cases of spontaneous pneumothorax, which are not associated with active tuberculosis or emphysema, are due to a pleural adhesion which is pulled out during coughing or some unusual muscular effort. All of my patients were young men, and all recovered. The outlook in spontaneous pneumothorax seems to be especially good.

Medicine and surgery have always taken the best from the new, retaining the best of the old, and made new combinations which surpassed what had gone before. Every physician and surgeon seeks what will do his patient most good; every physician and surgeon has and continues to battle on the front that which is digging in and destroying the need for doctors—prevention. For this, the highest reaches of service in the practice and art of medicine, we shall continue to use the tools of nature's garden, the fruits of man's laboratory studies.—*Archives of Physical Therapy.*

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Editorials

"MACKEY DECISION"

Rendered Null and Void by the Opinion of the Commissioner of the Workmen's Compensation Board of Pennsylvania

Several years ago the medical profession of Pennsylvania was stunned by an opinion given by Mr. Harry A. Mackey, then chairman of the Workmen's Compensation Board, and since known as the "Mackey Decision," to the effect that a physician could not render a bill for his services to an individual confined in the public wards of a hospital who was entitled to compensation under the Workmen's Compensation Act. The "Mackey Decision" provoked much acrimonious correspondence and debate throughout the State, and Mr. Mackey appeared at that time before various medical societies to explain and defend his position in the premises.

The State took a definite stand, on or about that time, that any hospital receiving State aid would have the same revoked if the members of the hospital staff rendered a bill for professional service to patients in the public wards, irrespective of whether or not they were workmen's compensation cases. The medical profession lost out in their argument that the Workmen's Compensation Act created a "new class" of patients.

There was recently given by Commissioner Houck the following very interesting and far-reaching opinion:

Opinion by Commissioner Houck

Distinguished from the decision of the Workmen's Compensation Board of Pennsylvania in the Yost v. Coxe Traveling Grate Company is this opinion by Commissioner Houck in the case of Gracey v. Brann & Stewart Company:

The facts in this case are not in dispute. The claimant was injured while in the course of his employment with the defendants. He was sent by them to the Harrisburg Hospital for operation and treatment. The staff physician on duty at the time, Dr. Walters, was assigned to the case, the claimant having made no request for the services of any special physician. The defendants or their insurance carrier paid the hospital bill amounting to $96.50, but refused to pay the bill of the physician, sent by him to the claimant, amounting to $100. Physicians on the staff of the Harrisburg Hospital are permitted by a rule of the institution to make charges against pay patients if permission to do so is granted by the medical committee or the superintendent. Permission was given in this case. The evidence shows that the claimant is a man of sufficient property to be financially liable for the payment of the doctor's bill, and it also shows that the claimant will feel obliged to pay the bill if the employer does not. In other words, the physician's bill will be paid either by voluntary action on the part of the claimant or by proceedings against him. After the claimant received the doctor's bill, he filed a petition to review his compensation agreement to have it provide for the payment by the employer of the doctor's bill. The referee dismissed the petition and the claimant has appealed.

The referee's order undoubtedly is based on the decision of the Board in Yost v. Coxe Traveling Grate Company, and cases which have followed it. That case stands for this principle: Where an employer sends his injured employee to a hospital, a member of that hospital staff, who, in his ordinary and usual service to that hospital as such a staff member, performs an operation or personally attends the injured employee, cannot collect a professional fee for his services in addition to the usual and ordinary charge which the institution makes for its service to the patient. We have said in Holmes v. t. Stuart & Son Co., A-5441 (opinion filed this day), and now we reiterate, that the principle of the Yost case is not to be extended beyond its own facts. We have then to inquire whether the Yost case controls the case at bar.

There is nothing in the Yost case to show that a rule of the hospital permitted staff physicians to make charges for services rendered patients. In fact, the case was decided on the theory that the services were not rendered to the patient but to the hospital. There is some warrant for holding that the staff physician is not entitled to a fee where his services are rendered to the hospital, and the hospital is paid. Nor is there anything in the Yost case to indicate that the claimant might have been held personally liable for the payment of the doctor's bill, or that he would pay it if the employer did not. These, we think, are two important points of distinction. If the liability of the defendant rests on an implied contract, as the Yost case indicates, then the implied contract between the defendant and the hospital includes the provision that the staff physician may, if permitted by the hospital, make a charge for his services to the patient. The contract includes this just as much as it includes the provision that the defendant will pay for the use of the operating room and the other usual charges made and permitted by the hospital. Charge may be made under the rule of the hospital only for pay patients but requires no argument to show that an injured employee is not a charity patient but a pay patient. For the first thirty days, his hospital charges are paid and he is a pay patient. If the

decision is to rest on the contract basis, we are of the opinion that under the facts of this case, the employer is liable for the surgeon's fee; by its contract with the hospital, the employer accepted the rule of the hospital that a staff physician may make a charge to pay patients.

Of more moment, however, is the fact that the employee will either voluntarily or by compulsion pay the doctor's bill if the employer does not. If that result should come about, it would be in the teeth of section 306 (s) of the Compensation Act as amended in 1919. Under that section, the employer is liable for the hospital bill and the doctor's bill, within fixed limitations with which we are not here concerned since all agree that the charge here made is reasonable and proper and within the limitations of the act. Whenever it becomes a question, as it is here, of whether the employer or the employee must pay the bill for reasonable and proper medical services rendered within the first thirty days of disability, the case is free from difficulty. The act specifically provides that the employer must pay this charge and not the employee. The superior contract created by statute, which is the foundation of the workmen's compensation legislation, makes it obligatory on the employer to discharge the obligation and to save the employee harmless. Under the facts of this case, the only manner in which the employee can be protected is by the employer paying the bill; we are of the opinion that he is bound to do this.

Of course, in no instance can a duplication of charges be countenanced. If the staff physician is actually remunerated by the hospital for his services to the patient, that is an end of the inquiry. But that is not the case. Here the hospital bill includes only these items: Occupancy, 27 days at $3, $81; for operating room, $10.50; for routine laboratory service, $5. The hospital bill includes no charge for the service of the physician. It is conceivable that the hospital could properly make a charge for the services of the physician. If that had been done, would not the employer be obliged to pay the bill? We do not see that it makes any difference, on the question of liability, whether the charge is included in the hospital bill or is made separately by the physician by express permission of the hospital. On all the facts of this case we are satisfied that it is not ruled by the Yost case or by any other case which we have decided. We are convinced that the plain terms of the compensation act require the employer to pay the bill of the physician. Since this charge was not included in the claimant's compensation agreement, the agreement should be modified. We shall reverse the referee's order and modify the agreement in accordance with what we have here stated.

The order of the referee is reversed and compensation agreement No. 1916883 is modified to provide for the payment by the defendant of the proper and reasonable medical services rendered the claimant during the first thirty days of his disability by the physician in the amount of $100.

A representative from our editorial office had an interview with the secretary of the Workmen's Compensation Board, who stated that the case herewith cited is the one which establishes the precedent; that the opinion given by Commissioner Houck on this case was definite; that the defendants had not appealed to the court concerning the decision; further, that the medical profession "could forget that there had been a Mackey Decision"; that there had been several cases since the one herewith quoted, in which the decisions given by the Commissioner of the Workmen's Compensation Board were similar to that given by Commissioner Houck in this particular case, and the defendants did not file any legal proceedings; therefore, the decision can be cited in favor of the physicians and surgeons.

We would, therefore, suggest that the members of the medical profession of our State acquaint themselves with the details of the facts herewith given, and have a conference with the administrative officer of their respective hospital affiliations, and have the problem discussed properly and adjusted.

PARROT FEVER

Occasionally the medical profession is stirred to activity by some disease of the lower animals or birds, etc., that has been transmitted to human beings. During the past two years the medical literature has been fairly teeming with articles on tularemia.

For the past month the newspapers have been giving much publicity to parrot fever, or psittacosis. The malady is probably causing a disproportionate amount of concern as a consequence of scattered deaths from the disease throughout the country. While it is known that all sorts of birds, beasts, and insects may be disease carriers, we are kept on the anxious bench wondering what will be the next source of contagion or infection. War without compromise has been made upon the rat, the mosquito, and others. While psittacosis is transmitted directly as a contagious disease from the parrot to the human being, it is believed that one human cannot transmit it to another.

It would seem that the present cases of parrot fever have been traced to parrots recently imported from South America. Not only have deaths occurred among the parrots themselves, but several deaths in human beings have been reported, directly attributed to having contracted the disease from a parrot. The newspapers record the fact that the first death in Pennsylvania was of a woman fifty-one years of age, who died in January at Freeport. After an autopsy had been done, her death was ascribed to parrot fever. In this particular case it is stated that the parrot had been received for a Christmas gift and, after a two weeks' illness, the bird died. The woman was taken sick five days later and died after the disease had run a regular course. Since then two cases of the malady which caused the mother's death have developed in the family.

Naturally the State Health Departments are on the alert for the report of any of these cases in their respective State. The cases that have been reported are undoubtedly due to parrots brought in from South America for the recent Christmas season, and no blame should be attached to the parrots that have been in this country previous to that time.

Dr. Theodore B. Appel, our State Secretary of Health, believes that all persons who wish to purchase parrots for pets should find out if the bird has been recently imported or if it has been in contact with birds that have come from South America. Since psittacosis has a definite period of incubation, there is no danger of parrots, which have been in this country previous to the first of December and have not been exposed to recent importations, having the disease or developing it.

THE VALUE OF THE TRISTATE MEDICAL CONFERENCE TO OUR MEMBERS

In this number of the JOURNAL will be found a report of the meeting of the Tristate Medical Conference held at Atlantic City, N. J., December 7, 1929.

We urge all of the members of our State Society to read this report. More especially do we emphasize the need for the officers of our State and component county medical societies to do so, because as medical leaders throughout the State they will be afforded ample instruction in several of the problems of organized medicine, and will be better advised of the plans they should follow in carrying the various messages to the profession.

Dr. H. O. Reik, secretary of the Conference, very advisedly has given a résumé of the discussions of the Conference since its organization in 1925. He has shown the inestimable value that should have accrued to New Jersey, New York, and Pennsylvania from these deliberations. While all three states have profited, no doubt New Jersey has brought about greater results than either of the other two states. We in Pennsylvania have profited, to a very great extent, and the lessons learned have been valuable, but in many instances have served only in a preparatory capacity. We hope that the preparations we are making will eventually lead to the happy end results for which we are striving.

These achievements will not be accomplished, however, until each physician becomes imbued with the responsibility he must assume in the place he occupies in the medical profession. After he has read carefully Dr. Reik's résumé, and the discussion it provoked, and then carefully read the paper by Mrs. Taneyhill on "The Public Educational Program of the Medical Society of New Jersey," he cannot fail to be impressed with the reiterated statements that the doctors themselves must first be educated to the needs of the day, so that when the public comes to them they will be prepared to meet the people intelligently. As stated in the Conference reports, in educating the public we are keeping ahead of the doctor, who looks on with a blank expression and wonders what it is all about.

The physician should be the leader and direct all the activities pertaining to matters medical in his community, and not be tweeked about by the nose, or ignored by the public agencies and allied societies working in his neighborhood. He should realize that preventive medicine is greater than curative medicine, and just as profitable if he will visualize its import and grasp the daily opportunities. He must fully realize that preventive medicine is more and more supplanting curative medicine, and he must fit into the daily scheme if he is to maintain his income. Too frequently he says his income is being decreased by the modern trend of events. This is not true. The fault is his because he does not grasp what he should do; hence does not arise to the occasion, and sustains a financial loss. Those physicians who keep in contact with their county and state societies, and read their medical journals, profit by the continual instruction received, and maintain the position they should in the community.

The doctor should realize that he must keep in touch with the daily activities of organized medicine. Unless he knows what is being accomplished in lay education, he will be hopelessly ignorant when consulted upon matters regarding which the people have been enlightened. Unless he is prepared to make periodic health examinations, the people will go to other physicians who are willing and prepared to do so, or they will go to institutes established for the purpose. These institutes flourish on account of the lethargy of the doctors in this regard. The doctor must realize that unless he is willing to do Schick testing, to give toxin-antitoxin injections, and to assume his many other duties to the public in health matters, the state department of health will step in. No use then for the doctor to yell murder! He failed miserably, and the state department of health simply had to take his place.

Again we urge every physician to read in full this report of the Tristate Medical Conference, and after you have read it, you cannot but real-

ize how indifferent the average physician is to all the problems discussed. Nothing is so pathetic as the indifference of the indifferent.

Again we urge: READ THE REPORT! ! !

DR. LAWRENCE LITCHFIELD

Dr. Lawrence Litchfield, for forty years in practice at Pittsburgh, Pa., died suddenly January 15, while visiting at the home of a kinsman, at Chestnut Hill, Philadelphia, where the funeral services were held January 17. Interment was at Marshfield, Mass. He was 68 years of age.

Dr. Litchfield had been in ill health for about three years, and retired from practice last December, at which time a testimonial dinner was given him in Pittsburgh by classmates at Harvard and at Bellevue, former hospital associates, and interns, comrades in war service, and fellow practitioners numbering about 150.

Dr. Litchfield was born in Grand Rapids, Mich., and he was graduated from Bellevue Hospital Medical College in 1888.

Dr. Litchfield was president of our State Society in 1922, and at the time of his death he was one of its trustees, councilor for the tenth councilor district, and a member of the publication committee of the PENNSYLVANIA MEDICAL JOURNAL. He was a gentleman of the old school, a consistent student, and an ardent champion of organized medicine, who toiled unceasingly in the vineyard of our State Society.

During the World War Dr. Litchfield was medical officer in charge at Camp Lee, Va. He was a fellow of the American College of Physicians. At one time he was vice-president of the American Medical Association.

He is survived by his wife, one son, two daughters, two grandchildren, a brother, and a sister.

A MODERN GROCER

Under this title a Philadelphia newspaper has given a write-up of a Philadelphia grocer, who no doubt to add to his propaganda secured the degree of doctor of naturopathy. He is a very extensive advertiser of a product which he is selling, and his advertisements include pictures of and testimonials from numerous doctors of naturopathy, and an occasional M.D., who in addition has the degree of N.D. The advertising matter is handled through a New York advertising agency. It seems lamentable that the people do not stop to consider that the testimonials thus secured from "doctors" and heads of non-medical institutions are "bought and paid for."

The following are quotations from the write-up referred to: "To step into a modern grocery store, consult its proprietor about your state of health or that of your family, and have him outline a food program to you by which your digestive or more serious ailments may be remedied, is an ultramodern service, even in this day and age. Yet who should be better able to correct or suggest the means of correcting one's food and living habits than the trained grocer?"

"If a grocer is sincere he must desire that his patrons enjoy the greatest possible degree of health. If he has studied the foods he selects from all parts of the world—studied them not only from a standpoint of purity, but for their nutritional value and relationship to one's health—he is rendering a double service. He should go further, and realizing the chemical component parts of the system, be able to suggest those foods by which the body may be supplied those mineral salts in which it is temporarily deficient and which will also supply the missing vitamins."

These quotations are submitted without comment. The wording affords much "food" for thought. After all, it is the public that pays the price and too often—the penalty.

This kind of publicity is an effrontery to people of intelligence. Yet, we are more than convinced of the famous saying of Barnum, about a fool being born every minute.

This "doctor" grocer depends on radio talks for a more extensive publicity, and many of the statements made are amusing, to say the least, to those physicians who listen in. The article refers as follows to this feature: "His radio health talks are attracting widespread interest, and his food suggestions have been the means of bringing health to hundreds."

Numerous physicians and laymen have asked why the local county medical society does not take some action in a matter of this kind. There is no reason why it should not do so. Properly bringing to the attention of the people the fallacies of this kind of propaganda, and associated misleading radio talks, would be a well worth while part of the lay education activity of a county medical society.

THE HARRISBURG STATE HOSPITAL TRAGEDY

On January 8th, the tragic death of Dr. Booth E. Miller, whose throat was slashed by an inmate, focused attention on the Harrisburg State Hospital, one of the best mental hospitals in Pennsylvania. The writer claims this advisedly; for since Dr. E. M. Green became its superintendent, he has seen this institution practically revamped from the physical angle, the installa-

tion of modern and diagnostic treatment therein, and the creation of a clinical service for extra hospital work, to one of the first hospitals in the field. Dr. Edward M. Green and his associates have always reflected the charm, the grace, and humanitarian consideration extended to visitors and the patients confined there for hospitalization.

Accidents are prone to happen in hospitals. Yet viewed in the light of a community, with all safety devices for the prevention of accidents, the accidents in these institutions housing over 300,000 patients throughout the United States are practically nil.

The most tragic accidents are those in which thoughtlessness on the part of the visitors plays a most important rôle. The tragedy under discussion was due to relatives bringing to the patient the razor used in the attack. In another institution not long since a tragedy occurred as the result of a visitor giving matches to a patient with which she set fire to her clothing, thus causing her death.

When one considers such records, the nature of the patients confined, the fact that hospitals are not prisons, and that the confidence in patients and relatives must be reëstablished, discussion at such a time should resolve itself into deepest sympathy for the hospital and its officers; and for the wife, relatives, and friends of the deceased. Said in a few words, the Harrisburg State Hospital should still live in the minds of physicians and the public as an efficient, well-organized, and well-administered hospital for the mentally ill.

Dr. Miller's death, although tragic, will not be in vain; for it will impress upon state authorities that despite the care, prevention, close supervision, and protection of its nurses and physicians, there are always potentialities of sudden deaths. Therefore, some adequate provision should be made by the city, county, or state, based on the years of service and salary received, in order that widows and fatherless children will not suffer economically from the death of those whose professional duties took them into the greatest fields of humanitarian service, a field where hazards lurk and life is not always certain. Three thousand, one hundred and fifty dollars is too small an evaluation of a professional life.

Mrs. Miller may rest assured that regardless of any such financial remuneration awarded by the State, she carries with her always the memories of the affection and esteem in which her husband was held, and may rest assured that not only the officers of the State Welfare Department, Dr. Green and his associates, but superintendents throughout the Commonwealth as well are interested in her future welfare.

MOTOR ACCIDENTS IN PENNSYLVANIA

Violations of the State motor vehicle code accounted for approximately one half of the motor traffic accidents in Pennsylvania during last year, according to a report compiled by William S. Canning, engineering director of the Keystone Automobile Club.

The violations included speeding, driving on the wrong side of the road, failure to observe the right of way, cutting in, passing standing street cars, passing other cars on curves or hills, failure to signal, and allowing automobiles to remain on inclines unattended and with brakes insecurely set.

"It is a noteworthy fact," said Mr. Canning, "that 30,219 of the 39,699 accidents reported for the first eleven months of 1929 occurred while automobiles were proceeding straight ahead. Only 601 occurred while cars were making right turns, and 311 while cars were backing. Left turns accounted for 2,105 accidents, and skidding for 3,742.

"There were 23,415 collisions between automobiles, 332 with horse-drawn vehicles, 317 with railroad trains, 809 with street cars, 2,844 with fixed objects, and 469 with bicycles.

"In the 317 collisions with railroad trains, 74 persons lost their lives and 254 were injured, a total casualty list of 330.

"In the 469 accidents involving bicycles, 15 persons were killed and 468 injured, a total of 483. The grade-crossing accident, being more spectacular, naturally attracts the most attention, but the State's record certainly emphasizes the danger of bicycle-riding on the highways.

"Comparison of the spectacular grade-crossing accident with the common collision at street intersections also is impressive. There were 11,907 intersection collisions, which resulted in death to 263 motorists and injury to 11,644. Collision with fixed objects, such as poles and signal standards, resulted in 168 deaths and 2,434 injuries."

Mr. Canning pointed out that, public belief to the contrary, speeding is not the most prolific source of highway accidents. The record shows 4,730 accidents, 116 of them fatal, caused by speeding; but the greatest number from any single cause, 5,561, was due to road hogs—that is, drivers who take more than their share of the road.

"Next in importance from an accident standpoint," said Mr. Canning, "is the operator who believes he is the only occupant of the road and acts accordingly at intersections. Thirty-four persons were killed and 2,793 injured in accidents caused by drivers' failure to observe the right of way."

Mr. Canning's analysis shows a total of 1,703 deaths and 32,594 injuries in the eleven months

due to all causes. The heaviest mortality and casualty toll was taken on Sundays, with a total of 326 deaths and 7,942 injuries. Saturday is next heaviest, with 295 deaths and 6,833 injuries. The time of greatest peril is between 4 and 6 p. m. More than 7,100 of the total accidents occurred in that period.

A law to rule the reckless driver off the road summarily will be sought at the next session of the Legislature by the Pennsylvania Motor Federation.

A test of drivers would reveal faults in operation by persons behind the steering wheel, and drivers need to undergo tests from time to time to determine their ability to handle a car. "Common sense and safety demand removal from the road of the reckless and unfit operator. The most effective way to accomplish this is through legislation with teeth and the strict enforcement of this legislation," stated S. Edward Gable, president of the association.

The Motor Federation head compared such a law with the one requiring the inspection of all motor vehicles and pointed out that reckless drivers should be "scrapped" in the same way as automobiles and trucks that have been deemed not road-worthy. "With speed limits increased, motor cars reaching new peaks of perfection in power, stability and safety, and highways of a supertype being constructed all over the State, it becomes imperative that drivers measure up to high standards," Mr. Gable added. "The reckless driver must go in order to abolish a constant hazard to users of our highways."

The motor vehicle financial responsibility act, passed at the last session of the New Jersey Legislature, went into effect on November 15th. The new law is similar to the one which has been in operation in Connecticut for several years and also, in many respects, to the financial responsibility law which became effective in New York last September. The persons carrying $5,000 to $10,000 personal liability insurance, and $1,000 insurance against property damage, are not particularly concerned with the new law, for they are accepted by the State as being financially responsible. The State will ascertain if owners of cars are financially responsible by questioning them, under oath, when they apply for 1930 registration and drivers' cards. The law provides that, before issuing licenses, the Commissioner of Motor Vehicles shall require proof of financial responsibility from any one who, after November 15th, shall be convicted of any violation of the motor vehicle or traffic laws, or who has been in two motor vehicle accidents resulting in death or injury, or property damage to the extent of $100.

Parking is governed by local ordinances and a conviction for illegal parking does not apply. The law is not retroactive. Accidents or violations of the law occurring before November 15th do not go against a motorist's record.

JOTS AND TITTLES

Science and Research

At a meeting in Des Moines, Dr. J. Bronfenbrenner, professor of bacteriology at the Washington University School of Medicine, stated that a systematic study of the properties of the bacteriophage failed to substantiate its living nature. Since its discovery by Dr. F. d'Herelle, the bacteriophage has caused much scientific controversy. Dr. Bronfenbrenner believes that it exhibits a stimulating effect on closely related bacterial species, which results in an abnormally increased intracellular metabolism. This so increases the osmotic pressure within the cell that, in the presence of water, the bacteria will swell and burst. John E. Walker of the research laboratories of E. R. Squibb & Sons reported that the bacteriophage is active in suppressing the effects on animal tissue of a definite germ, without harming the tissue, at much greater dilutions than are mercuric chlorid, phenol, formalin, tincture of iodin, and chloramin.

In attempting to remove what they thought was a poison from a proposed anesthetic, Professors G. W. H. Lucas and F. C. Henderson, of the University of Toronto, discovered that the supposed poison, cyclopropane, is a better anesthetic than the propylene they were attempting to perfect. Cyclopropane may prove superior to ether or chloroform for certain surgical operations.

A highly complex sugar, reducible to ordinary glucose, has been obtained from the tubercle bacillus. The discovery of this sugar was reported at a session of the American Association for the Advancement of Science. Dr. William Charles White of the United States Public Health Service believes that this sugar might be the chemical band between the tuberculosis bacillus and the one kind of human body cell in which tuberculosis is able to spread. If the sugar is given to healthy animals it is harmless, but to those with tuberculosis it is deadly. The sugar seems to be definitely related to fever and serious symptoms which involve loss of appetite and wasting away.

Dr. H. Gideon Wells, of the University of Chicago, in a lecture at the Johns Hopkins School of Hygiene and Public Health, claimed that the most hopeful thing about cancer has been brought out by Miss Maud Slye's studies of cancer heredity in mice. While a tendency to cancer is hereditary, a tendency to resist it is also hereditary, and the resistance to cancer dominates the susceptibility to it. Cancer is about the same in animals and in man, and heredity is the same. Therefore, Dr. Wells believes that what we learn about cancer heredity in animals should have some relation to cancer in human beings. In fact, after the lecture he said, that he considered the method of animal experimentation the only way to solve this problem.

The doctors in the Civil Hospital in Guayaquil, Ecuador, have developed a novel treatment for paralysis. They loose a boa constrictor in the ward. Since the majority of patients are either malingerers or have a form of imaginary paralysis which can be overcome by

shock, most of the patients recover. The true paralytics are reassured as soon as possible.

According to a press report kerosene injections have been used as a treatment for cancer in the Auckland Hospital, Auckland, New Zealand. A resident of Frankton was brought to the hospital two years ago suffering from what the hospital authorities diagnosed as cancer. He was given the kerosene treatment for a year and discharged, apparently cured. Since then, the doctors declare, there has been no recurrence of the disease and a recent examination by the Health Department revealed only a cavity where the growth existed. The kerosene was injected at a high temperature and allowed to cool to blood heat. The process was unpleasant and painful, but the doctors believe that the cure was worth the treatment.

Radiology for Cancer

According to the *Times Weekly*, (London, England), October 24, an administrative change that was inaugurated in October at Middlesex Hospital, London, England, has been described by eminent medical authorities as one of the most striking advances in British radiology. An anonymous donor has guaranteed the hospital five beds for seven years, these beds to be in charge of the hospital radiologist in order that cancer patients who wish to avoid surgical operation can have radiologic treatment if such treatment is considered advisable.

Cancer patients at Middlesex Hospital have hitherto been classed as surgical cases, being passed to the radiologic department only at the discretion of the surgeon. The new arrangement by which patients can go direct from their own medical adviser to the radiologic department is not only a recognition of the growing importance of radiologic treatment, but also marks a step forward in the closer coöperation between surgeons and radiologists. Middlesex Hospital, it is believed, is the first institution of its kind in Great Britain to adopt this new arrangement.

Dr. Duncan Fitzwilliams, of St. Mary's Hospital, London, in a recent address to York Medical Society, said that on a five-years' average they had cures by radium in 60 per cent of operable cases of cancer, 37 per cent in borderline cases, and 28 per cent in inoperable cases.

The reluctance of patients to consult a doctor, he said, was due to fear of the knife. That was the reason they would follow faithfully any unorthodox treatment. "If you can get into people's minds as soon as they feel a lump," he added, "that if they will go and get treated by radium they will avoid the knife and all horrible mutilation and disfigurement, you will have done the greatest thing in the campaign in cancer that was ever done."

Divorce Rate High in Mental Disease

The encouraging report that men and women suffering from serious mental maladies are not so likely to raise families as normal persons has been brought to the American Statistical Association by Dr. Neil A. Dayton, director of research of the Massachusetts Department of Mental Diseases.

Dr. Dayton has made the first comprehensive survey of the marriages, divorces, and size of families produced by patients suffering from psychoses, that is, such diseases as dementia præcox, manic depressive psychosis, general paralysis of the insane, and alcoholic psychosis. Twelve thousand families of patients discharged from Massachusetts State hospitals during the past twelve years were studied.

Something in the biologic make-up of the individual with mental disease interferes with his marrying, Dr. Dayton explained. Among those who establish homes, the same mental twist interferes with the maintenance of a permanent household. The divorce rate is five times as high among the individuals studied as it is among the normal population. Psychotic individuals tend to have smaller families than are found in the normal population. Sterility is three per cent higher among the psychotic patients who marry than among normal individuals. The figures on two generations obtained by Dr. Dayton indicate in general that mental disease does not tend to stimulate a desire to marry and rear children, but on the contrary it blocks those desires.

The frequently heard statements that birth injuries and advanced age of the parents are responsible for much mental disease were refuted by Dr. Dayton, who said that neither of these conditions figures to any extent in producing psychoses.

Italy Adopts Birth Control

Defying the moral precepts of the Catholic Church, and the exhortations of the Fascisti, the people of Italy have ceased to obey Mussolini's command to "increase and multiply as the sands of the sea." The birth rate of Italy shows a greater decline than that of France and Britain, hence the reason for Mussolini's order. After two years of propaganda in favor of bigger families, the birth rate shows a further decline of twenty-seven per cent.

The taxation of bachelors, tax exemptions to married men and women as candidates for all government employment, maternity bonuses, bonuses for married female bank employees, Il Duce's present of money and a signed picture to big families, widespread campaigns, exhortations to blushing brides fresh from the altar, all have been in vain. Mussolini's slogan would seem to be "less whoopee, more woppee."

More Instruction for Parents

A little book, *Child Management*, published by the government is in great demand. Its popularity exceeds that of the *Congressional Record*. It deals especially with what used to be, and perhaps still is, described as tantrums. Modern parents apparently are quite perplexed by this familiar phenomenon of childhood.

There was a time when the remedy was comparatively simple. A child was made to behave by physical force, if necessary. In country districts the woodshed was a traditional aid to discipline. Perhaps the scientific information so frequent nowadays has paralyzed, rather than strengthened, the parental arm. The answer of the Lord to Job out of the whirlwind is still pertinent: "Who is this that darkeneth counsel by words without knowledge?"

Dakin's Solution Is Formed At Turning of Switch

A new machine takes common salt and ordinary lighting current and automatically produces Dakin's solution which is formed in a specially designed miniature electrolytic cell. This was developed in the chemical engineering laboratories at Iowa State College.

Carbon electrodes were adopted for use in this cell after trying out electrodes of platinum, tantalum, nichrome, and carbon. The upper electrode, or cathode, is hollow and slips over the lower electrode, or anode,

from which it is insulated by a cement. The electrodes are contained in a cylindrical glass bulb, the bottom of which is drawn out to a small tube. The salt solution enters at the bottom, and as it flows between the electrodes it is decomposed, forming sodium hypochlorite solution. This passes through a glass tube on the side of the cell. The rate of flow is regulated by a glass stopcock.

The current is supplied from the light line through a battery charger and is regulated by a rheostat. The flow of the solution through the cell is controlled by an automatic valve which remains open while the current is flowing. After the current and solution flow have been regulated, sodium hypochlorite of the proper concentration and alkalinity is produced at the turn of the switch.

The whole apparatus, except the salt container and battery charger, can be placed in a box 6 by 12 by 7 inches, which is large enough for a physician's office. A portable set operating from the storage battery of a car, or a larger set for hospital use, can be made.

Woman Scientist Breathes But Five Times in a Minute

A young woman physiologist, who breathes only three to five times a minute, has been the object of great scientific interest and public curiosity. The phenomenon came to the attention of Dr. Benedict, a leading research worker in the field of human physiology. A thorough search of the scientific literature was also made. No other instance of such slow breathing has ever been found.

Although her breathing is slow, the depth of the breathing is greater than normal. She inhales three pints of air at a time, whereas ordinary people inhale only one pint. Her lung capacity, however, is normal and not larger than that of the average person. The air passing through her lungs is normal in amount and the amount of oxygen she extracts from it is also normal.

MEDICOLEGAL NOTES

Hospital Fees are Denied Worker in Massachusetts.—Under the State Workmen's Compensation Act, according to a decision of the Supreme Court of Massachusetts, an insurance company cannot be required to pay the hospital and medical services rendered to an injured employee after full payment of compensation has been made.

Mississippi Opposes Compensation Law for Labor.—Some organized labor bodies of Mississippi have actively opposed the proposed workmen's compensation law for the state. They regard the present law as adequate to assure protection to workers in case of injury.

Medical Service in State Compensation Act Defined.—In the California Workmen's Compensation Act, the term "medical, surgical, and hospital treatment" includes services rendered by an osteopath who has a certificate of physician and surgeon, but does not include services rendered by the holder of a "drugless practitioner's certificate" is the opinion of Attorney General U. S. Webb. Attorney Webb believes that there is no provision in the law of California which recognizes the various scholastic degrees, or which distinguishes between them.

Pennsylvania Constabulary and Medical Witnesses.—Whether members of the State highway patrol may retain physicians as witnesses to testify whether arrested motorists were operating motor vehicles while under the influence of intoxicants or narcotic drugs is entirely dependent upon the district attorney in the county in which the patrolmen are operating, the Department of Justice ruled in an opinion January 10. The opinion cites that difficulty has been experienced in getting reputable physicians to serve as witnesses because the witness fees and mileage allowed court witnesses offer insufficient remuneration for a professional man. State law, however, authorizes district attorneys or officers directed by the district attorneys to incur expenses in investigation of crime, which can be added to costs of prosecution. The opinion suggests the proper method is for troup commanders of the patrol to make "a workable arrangement" by which the district attorneys authorize the patrolmen to employ physicians in cases where motorists are suspected of drunken driving.

PUBLIC HEALTH

Indiana to Study Meningitis Cases.—Dr. W. W. Lee, state epidemiologist, will attempt to trace the source of the 30 cases of spinal meningitis which developed in Indianapolis during December. The City Council voted $5,000 from the Mayor's emergency fund to combat the epidemic.

Extension of Health Service Units in Rural Districts.—Public health authorities are agreed that the best results can be secured through the establishment of whole-time local health service in the rural sections where such work is most urgently needed. The eighty-three county health departments, established in the area affected by the Mississippi flood, have been effective in averting outbreaks of disease, and the success of this plan has attracted favorable attention of health authorities in this country and abroad.

Tuberculosis Deaths Expected to Decline.—"The time is not far distant when a new major decline in tuberculosis may again take place," statisticians of the Metropolitan Life Insurance Company have declared. Their earlier prophecy that 1929 would see the lowest tuberculosis death rate ever recorded in the United States will certainly be fulfilled. Reports through the end of November, the latest available, showed a rate of 85.9 per 100,000 which is a decline of 5.7 per cent, compared with the corresponding period of 1928. Tuberculosis will some day rank among the relatively minor causes of death. A death rate of 40 per 100,000 will probably be approached during the next ten years. "The greatest reduction in the mortality from tuberculosis has taken place in that group of the population where the situation has always been the gravest," the statisticians pointed out, referring to the group of wage earners and their families. "With the attainment of a death rate of 40 per 100,000, we shall have reached the point where the end of the fight against tuberculosis will surely be in sight," they stated.

Studies of Clinical Observations of Early or Moderately Advanced Cases of Leprosy.—The Public Health Service has recently issued a report on leprosy from the leprosy research station of the Service in Hawaii that is of interest to all and should be of special value to physicians who are interested in diseases of the skin and of the nervous system. This report points out that leprosy is by no means always

the repulsive condition that it is traditionally regarded as being, but that often the signs and symptoms are so slight or so indefinite that there is required great discrimination upon the part of the physician, and perhaps he may require repeated examinations before coming to a decision in some cases. The microscope is often of value in making a diagnosis.

The study is based upon the minute investigation of 250 cases by experts, and it is emphasized that the onset is usually insidious and that perhaps two years on an average will elapse before the patient is admitted to a hospital. A point of interest is seen in the long periods of quiescence of the disease during which the victim is apparently free from any signs of the infection. The report concludes by comparing certain features of leprosy with tuberculosis and the suggestion is made that means of handling the disease similar to those that have been successful in tuberculosis may prove of value. Perhaps, to the layman, the most striking feature of the report is the information that spontaneous arrest of the disease, of greater or less duration, is a common occurrence.

U. S. Public Health Service Broadcasts for 1930.—Since 1921 the Public Health Service has prepared radio broadcasts on public health subjects for use by the various broadcasting stations throughout the United States. More than two hundred broadcasting stations are using the material prepared by the Public Health Service. For the year 1930, Surgeon General H. S. Cumming of the Public Health Service has secured the coöperation of eminent specialists throughout the country in the preparation of these broadcasts. Twice each month during 1930 the Public Health Service will send out to the various radio stations coöperating with it a broadcast prepared by an eminent specialist giving his views on the particular subject to be discussed. Among the subjects of interest to the general public may be mentioned colds, influenza, rheumatism, and cancer. These subjects are discussed from the public health and preventive standpoint, as related to the community and the individual.

Possible After Effects of Contagion.—A review by comparison of certain statistical data by the Philadelphia Department of Health, reported in *Healthfax*, raises the question of the possible after effects of contagion. From these data it is apparent that there has been a marked decrease in Philadelphia during the last twenty-eight years in the mortality from communicable diseases, and on the other hand a large increase in the mortality from organic diseases, as illustrated in the figures for cancer (59.8 per cent increase), heart disease (84.9 per cent increase), and diabetes (15.5 per cent increase). The explanation for this increasing mortality rate is the subject of much speculation and may have to do with factors other than infection, such as the stress and strain of modern life and the possibility that the incidence of organic disease is subject to waves or fluctuations which may extend over several generations, and that at present we are passing through a period when these diseases are at their highest level.

It is also possible that some of these diseases, especially heart disease, are exhibiting this increased mortality because of the marked prevalence thirty years ago of certain infectious diseases, which effects are now apparent in the later life of individuals who were children at that time.

Because of the survey quoted, some thought should be given to the importance of the control of contagious diseases in relation to residual lesions, such as nephritis, cardiac diseases, and arteriosclerosis. Nephritis is a frequent sequel of scarlet fever and is often the fundamental factor of the causation of death late in life from renal diseases, and secondarily from heart disease and arteriosclerosis. The most frequent cause of heart disease may be attributed to a youthful illness from one of the contagious diseases, such as acute rheumatic fever, septic sore throat, scarlet fever, and diphtheria. Acquired syphilis is also an important etiologic factor. Many of the patients who survive an attack of one of the above diseases may go on for many years of comfortable life, and be taken away during the most productive period of their lives, as the result of renal or cardiac disease, the foundation of which may have originated in an attack of one of the above contagious diseases.

HOSPITAL ACTIVITIES

The Patient's Record—*Continued*

The component parts of a record will vary according to the needs of the respective hospital. For discussion in this article let us assume the needs for a general hospital. For this type of hospital the chart will ordinarily be composed of the following: Admission, graphic temperature chart, personal history, physical examination, progress record, treatment record (physician's orders), laboratory record, operative record, and the nurses' record. For special departments, more especially maternity, special forms will be needed. It will expedite the handling of a chart if the various records are on differently colored paper.

The admission sheet should be filled in at the time of admission. The personal history and physical examination records should be filled in at the earliest moment after admission, surely not later than twenty-four hours. Please bear in mind that the Board of Medical Education and Licensure of Pennsylvania requires that "for pedagogical reasons, the signature of members of the staff should be attached to records while the patients are being treated in the hospital, and not after discharge. After the history and the physical findings have been written by the intern, the chief should read them carefully and make such changes as he deems necessary after talking over with the intern the need for the corrections. He should then countersign the same, the intern having signed the record right after writing it. A policy of this kind, if followed throughout the hospital, would assure the attention on the part of the chief which the work of the intern merits." The American College of Surgeons requires only one signature.

The proper filling in of the admission card or sheet is exceedingly important, and this duty should be assigned to one of the office force trained in its requirements. When taken care of otherwise errors are frequent, because the individuals have no idea of the necessity for accuracy. More especially is this true of night admissions, when this clerical detail is assigned to a pupil nurse. In many institutions this duty is assigned at all times to a pupil nurse, rarely with any previous instruction.

The following should be on the admission sheet: The name, which should be printed, and the correct spelling obtained; if a female and married or widowed, her own full name should be given (The correct name is essential not only while the patient is in the hospital, but for future reference); the address, which should be printed and correctly spelled; the date and time; the telephone number where patient lives; by whom accompanied; social status, whether single, married, wid-

owed, or divorced; age, nationality, white or colored, and denomination; whether admitted by ambulance, patrol (give its number), walked in, or otherwise; occupation, by whom employed, and the address; nearest relative or friend, and their telephone number (It is of interest that some institutions have ruled that a father or mother is the nearest relative rather than a husband or wife, or even a son or daughter. It would be safe to give the nearest relative from the standpoint of legal responsibility); the name, address, and telephone number of the referring doctor (this is essential for divers reasons. Too frequently the name is recorded of the doctor to whom the patient is referred, instead of the doctor referring the patient. Because the staff doctor as a rule requests the admission, it is assumed that he has referred the patient. The patient should be definitely asked in regard to this point); the name and address of the person guaranteeing payment of the bill. This is essential. Then the person taking the admission should sign the same to fix responsibility.

On the admission sheet there should be space devoted to the chief resident physician's notes. This record should include chief complaint; temperature, respiration, and pulse; weight; blood pressure; and the result of the examination of the eyes, teeth, nose and throat, heart and lungs. The chief resident physician's examination applies more to those patients not referred by a doctor. His record should show, too, the provisional diagnosis; the service to which the patient is assigned; the name of the chief on service; the name of the intern; whether patient is admitted to ward, semiprivate, or private room, and the rate per day. There should be a space in which to give full information in accident cases.

The discharge sheet should occupy the lower half of the admission sheet. This record should afford the following information: working diagnosis; final diagnosis, which should be entered in full, as too frequently omissions occur, because the intern does not properly check up his records; if an operation has been performed, the name of the operator, date of operation, name of anesthetist, and kind of anesthetic used. Under treatment, important points should be noted. The complications should be given, and the pathologic report entered. It is very important to note condition on discharge. The hour and date of discharge are necessary. The discharge sheet should be signed by both the intern and the superintendent, and approved by the chief.

All charts should be completed as of date of discharge ready for final inspection and disposition by the chief, who either approves the chart or rejects it for necessary corrections.

What Rule Should Be Made Governing Smoking by Student Nurses?—During the past few years, many hospital superintendents and directoresses of nurses have been confronted with this question. There are those who have persistently frowned upon this practice by student nurses. There are others who formerly were as strongly convinced of the folly but who have allowed their convictions to be so softened that they have either withdrawn their objections or have come to regard the situation as hopeless. To them it represents a decadence in public good manners if not morals. The situation presents a practical problem that must be faced with common sense. There are several aspects to this question, of which fire risks in nurses' homes are not the least.

It has been stated that the health of young women who have not as yet reached their majority is not enhanced by excessive smoking. There are still others who consider that graduates in nursing should set a rather high standard of propriety and ethical practice, and who believe that smoking in public is not conducive to the elevation of public opinion concerning the members of their profession.

A physician in attendance upon the members of a hospital training school who were ill was recently surprised and not a little angered to find that his patients, who were suffering with pharyngeal and tonsillar infections, had been smoking in his absence. This practice assumed a distinct medical aspect and the offending nurses were plainly and emphatically told that if they desired his professional care there must not be a repetition of this happening.

It would be a fine thing for the health of the student nurse and for the school generally if a rule forbidding smoking by undergraduates could be enforced. Although in the light of present-day opinion this would seem impossible, it is felt that the time has not come when an official recognition of the practice of smoking by student nurses, either in their rooms or in public, should be given by the hospital.—*Mod. Hosp.*

A Hospital for the White Collars.—How are persons of moderate means to meet the charges which serious illness entails? The question is not a new one; it has been discussed from many points of view. The rich take care of themselves; the very poor are taken care of. But the "white-collar" worker is not offered charity, nor would he accept it if he were. Yet his margin of financial safety is usually so narrow that sickness may easily run him into debt.

A practical attempt to solve his problem is to be made by the Massachusetts General Hospital in Boston. In a large new building, well equipped with every modern convenience, the patients who shrink from the open ward and are still not able to pay for a private room will receive adequate attention. This hospital within a hospital is expected to be self-supporting. But all the charges, including the fees of physicians and surgeons, will be reduced to the lowest possible level.

It is true, of course, that in most hospitals the ability of the patient to pay is more or less considered; and the medical profession does much work that is practically free. But the plan of the Massachusetts General is an effort to meet a serious need in a methodical way.—*Philadelphia Public Ledger.*

PHYSICAL THERAPY

Electrosurgery—A New Field for the Surgeon

When surgeons of the caliber of Harvey Cushing and Howard Kelly state that they feel electrosurgery is indispensable to them in their regular operative technic, it is time for other surgeons to investigate this field.

It is true that the use of electrical currents for surgical purposes requires a special knowledge of electricity. Many good surgeons have probably been duped by glib salesmen into the use of inferior electrosurgical apparatus (and there are many inferior machines on the market) only to put them aside with disappointment after a few unsuccessful trials. Even with excellent apparatus, electrosurgical technic must be developed with painstaking care. Place the finest scalpels, scissors, and retractors in the hands of the average general practitioner, and he will not be able to do good abdominal surgery; nor will the average general surgeon be able

to do good electrosurgery until he has developed a technic.

Surgical diathermy offers a superior method for the removal of certain benign new growths, yet it is little used by the general surgeon. It is especially applicable to the removal of simple warts, corns, nevi, fibromas, papillomas, hemorrhoids, urethral caruncles, venereal warts, and granulomas. All these lesions can be treated by simple desiccation or fulguration with a monoterminal, high-frequency current with less danger of infection and with excellent cosmetic results.

Malignant new growths may be removed by biterminal high-frequency currents. The results are comparable to those obtained by the use of radium, but there is an immediate effect and there is no latent period of reaction or inaccuracy of results.

The high-frequency current is less expensive than radium, it is more readily handled, and it is less dangerous. In addition, results can often be obtained in a few minutes' time. The undamped, high-frequency current is used also for cutting purposes.

The writer recently saw an accomplished electrosurgeon destroy, by means of electrodesiccation, a melanosarcoma on the conjunctiva. He did this operation swiftly, aseptically, painlessly, without hemorrhage, and with only a topical application of 4-per-cent cocain. We know of no other method in which the result could have been accomplished so expeditiously.

The electric current used for surgical purposes sterilizes its own field, arrests hemorrhages, prevents metastases in malignancy by sealing capillaries and lymph channels, and, when properly used, limits pain and eliminates shock. Electrosurgery undoubtedly merits greater attention from the surgeon, but before attempting it, the surgeon should first ground himself in the fundamentals of electrophysics and then very gradually and carefully develop his technic.

Therapeutics of Static Electricity.—Dr. William Benham Snow believes that only those who do not know the scientific use of this most valuable means for relieving suffering consider it a measure for psychic or suggestive distraction; for there is no measure so profoundly effective in producing distinctive physical effects for the relief of inflammatory conditions as the various modalities employed with the static current. The static modalities most commonly used in therapeutics are the induced current, wave current, sparks, and the brush discharge.

He concludes as follows: (1) The peculiar effects of the static current are derived from the fact that it is a direct or constant, high-potential current, and possesses the characteristic qualities of the constant current in inducing direct muscular contraction of the muscle cells. (2) The effects of the static current important in therapeutics are: The mechanical removal of infiltration from engorged tissues where no infection is present. It produces a complete relief of tense muscles when applied, thereby overcoming muscular contraction associated with the inflammatory processes. With the general administration of the one-pole modality, it has a remarkable effect in improving local and general metabolism. (3) There is no other electric current available at present which possesses the same characteristics and is capable of the same therapeutic effects as the static modalities. Since it is so remarkable in its influence on inflammatory conditions, it is indispensable for prompt and complete relief of those conditions.—*American Medicine.*

INDUSTRIAL MEDICINE

Gain in Mortality Rate Among Industrial Workers.—According to the Public Health Service the mortality rate among industrial employees was higher from sickness during the first quarter of 1929 than in the same period of any year since 1920. This increase is due to the combined influenza-pneumonia which showed an increase of 88 per cent over the rate in the first quarter of 1928. Disabilities, lasting more than one week on account of influenza and pneumonia, in the sample of industrial population increased 147 per cent. Sickness from nonrespiratory diseases occurred, generally, at much the same frequency in the two periods.

Dusty Trades and Pulmonary Infection.—Of the dusts which are found in industry those composed of organic matter are far less injurious to the health than those composed of inorganic matter. Dusts have been classified as cutting, irritant, inorganic poisons, soluble saline, organic poisons, and obstructive and irritating. Any or all of these dusts may irritate the lungs and lower their resistance to infection. Most of the more serious pulmonary complications are due to the inhalation of silica dust. Workers engaged in sand blasting, rock drilling, or stone cutting, show fairly high tuberculosis rates. The incidence of tuberculosis appears to be more or less in direct proportion to the actual silica content of such dust.

The following theories have been suggested to explain the action of silica dust on the lungs. (1) The hardness and sharpness of the inhaled particles produce sufficient irritation to cause pathologic changes associated with silicosis. (2) The silica particles dissolving in the alkaline juice of the lung produce silicic acid which is toxic. (3) The inhaled particles behave like the colloidal salts of silicic acid which absorb various substances and consequently produce reactions.

The danger from silica dust in the lungs is that it predisposes the individual to infection—particularly with the tubercle bacilli—and his reaction to intercurrent infections, as pneumonia, is greatly altered. This has been demonstrated in the laboratory.

Employment Bureau.—The creation of a central city placement bureau for Philadelphia's handicapped where they may be taught occupations suited to their abilities and later found jobs was proposed at the luncheon of the Council for Social Agencies held at the Bellevue-Stratford, January 14th. Dr. Francis W. Sinkler, member of the executive committee of the Council, outlined a complete plan whereby the physically unfortunate of the city may be placed "upon a self-respecting and self-supporting basis." The several hundred social service heads present immediately voted to refer the plan for study and probable execution to the executive committee of the Council. The proposed employment bureau for the crippled and disabled would include four phases of a large problem now confronting every agency of the city individually. The bureau would train the applicant for a particular occupation, find him employment, give social-service aid to him and his family, and finally market his products after having supplied him the raw materials with which to work, if he is not the type to be found in occupation outside his home or institution. The need for a city-wide survey of child-welfare needs in Philadelphia, with special reference to the part the juvenile courts are playing or failing to play in the solution of the child delinquency problem, was stressed by J. Prentice Murphy, of the Children's Bureau.

"Dry Ice."—The number of claims which have been filed with the Ohio Industrial Commission for injuries received while handling frozen carbon dioxid, or "dry ice," for industrial purposes, has caused the U. S. Government to issue a warning to workers handling this product. The "dry ice" has recently come into extensive use for commercial purposes, especially in ice cream and dairy plants. Its temperature is about 110 degrees below zero, or 140 degrees below the temperature of ordinary ice. Although it looks harmless enough, it can do considerable damage to the person who handles it with bare hands. Numbness and pain, not only in the fingers, but also in the hands and arms, are the first symptoms, and in some cases a form of neuritis is produced.—*Science.*

TRISTATE MEDICAL CONFERENCE

The regular autumnal session of the Tristate Medical Conference was held December 7, 1929, at the Hotel Chelsea, Atlantic City, N. J., Dr. Andrew F. McBride, President of the Medical Society of New Jersey, presiding. Those in attendance from Pennsylvania were: Drs. William T. Sharpless, West Chester; Ross V. Patterson, Philadelphia; Walter F. Donaldson, Pittsburgh; Frank C. Hammond, Philadelphia.

DR. MCBRIDE: I wish to acknowledge the privilege and honor I feel at presiding over this assembly. I have heard much about the Tristate Conference in the past and I think it has done a great deal of good for the profession in these three states. We are all striving for the same ends and I feel sure that these conferences will help us to accomplish a great deal.

As the first speaker listed on the program has been unavoidably detained, we will call upon Dr. Henry O. Reik for his paper.

Profitable Results Accruing from Four Years of the Tristate Conference

HENRY O. REIK, M.D.
ATLANTIC CITY, N. J.

With this meeting, we are entering upon the fifth year of the Tristate Medical Conference, twelve previous sessions having been held during the four years since November 7, 1925, when the first meeting was convoked in Atlantic City. Under the plan of organization adopted, the personnel of the convention changes slightly each year, but under a modification of the original scheme we have been enabled to absorb these necessary changes and at the same time to retain as many of those passing out of office as might desire to continue in association with the conference. As the majority of those attending this, the thirteenth conference, were not embraced in the organization meeting, and as it is important that those participating in our deliberations shall have knowledge of what has gone before, it seemed to your secretary worth while to restate the aims and objects of the organization, to review, at least by title, the subjects that have been considered at previous meetings; and to attempt to measure the results growing out of four years of experience. The two first features will not be difficult to present; the third, a deduction of results, will necessarily be limited largely to observations on what has resulted in the territory with which the secretary is most familiar—that is to say, of the benefits derived by New Jersey—leaving members from New York and Pennsylvania to speak whether those states have profited by establishment and development of this conference plan. Out of the entire résumé, it may be possible to determine whether the effort has been worth while.

The purposes of the Tristate Medical Conference can possibly best be stated by referring to the minutes of the first meeting, held on November 7, 1925, pursuant to an invitation from the Executive Secretary of the Medical Society of New Jersey. As explained in that record, the said secretary was impelled to suggest an interstate conference for the following reasons: (1) Because he had been advised by the secretary of his state society, Dr. Morrison, to acquaint himself with the methods being employed in the neighboring states of New York and Pennsylvania to solve professional problems and to conduct public education in medical matters; (2) because experience with legislative matters affecting the medical profession had disclosed the fact that there were a number of questions inviting harmonious action by the three neighboring state medical societies and which, in consequence, must be of interest to the officers of those societies; and (3) because a dispute that had arisen between the Boards of Medical Examination and Licensure of Pennsylvania and New Jersey gave birth to the idea that such friction might possibly be avoided by effecting closer relationship between the medical societies of these three states. It appeared somewhat ridiculous that there should be such wide differences in the medical laws of these three states which are so closely linked together in other respects, and that a physician of the highest standing on one side of the Hudson or the Delaware River should be an outlawed practitioner on the opposite bank of either river; when either stream could be crossed in a few jumps and both had to be crossed daily by some members of the profession in the natural course of their work. New legislation was constantly being enacted in all three states, concerning the right to practice medicine, the control of infectious diseases that recognize no geographic boundaries, and other matters of interest to all the professional men of the district; and yet, no effort was being made to secure uniformity of legislation or to harmonize existing laws. Furthermore, all three state societies were more or less actively engaged in promulgating disease-prevention programs, in directing public-health movements, and in the consideration of intraprofessional, scientific, and economic problems; and yet, there was little or no effort at correlation of labors or direct exchange of ideas and experiences.

In the business world, coöperation was the watchword of the hour and, imbued with the double hope of learning something about how to perform our own duties and of aiding in reduction of the existing chaos, we discussed with Drs. Hammond and Overton the desirability of bringing about some sort of a conference in which the officers of the three state societies should regularly participate. Having received their endorsement to a plan for calling a conference of those officers charged with the conduct of the business of the respective state societies, plus the editors of the three journals and the secretaries of the State Boards of Medical Examiners, we sent a letter to all the parties thus classified, explaining briefly the object of a meeting to which they were invited. The term *conference* was deliberately chosen as a designation for this organized group, because the primary object was to *confer*, to *consult*, regarding conditions in the states represented, and to take under advisement any suggestions or plans that might develop from consideration of our problems. It was never the intention that this group should definitely decide questions for the medical societies repre-

sented, nor in any sense bind those societies to a specific program of action; the members of the conference bringing no such authority from the societies they represented. It was intended that we should come together to discuss questions of vital import to organized medicine, to consider ways and means of locally dealing with those problems, and possibly to arrive at conclusions which we could report to our respective organizations with a view to effecting harmonious action throughout the territory covered by these three societies. It is much to be desired that we shall agree upon definite means of solving our problems and that whenever possible we shall unite in recommending specific action to be taken by all three societies simultaneously, but it is recognized that while definite, positive action, universally applicable, is always desirable, there will be times when such action is not practicable. When questions of the last-mentioned sort arise, we can at least endeavor to bring about such action as will not seriously conflict and will not be a source of irritation to the physicians practicing in these states.

Since the original date of organization, several changes have been made in the plan of representation. First, it was decided to exclude representatives of the State Boards of Medical Licensure; as individuals, they are all charming men, and as members of the profession, all are interested in some of our important problems, but they are officers of state boards and not officers of the medical societies; and it seemed wiser to limit conference membership to society officers and to invite outsiders to attend meetings whenever their presence should be desired. A second change came about when some of those who had been active workers and were deeply interested in the conference lost their membership by becoming ex-presidents of their societies. So, it was voted that ex-presidents of the state societies should be included in membership of the conference so long as they showed interest in its proceedings and remained active participants. At the present time, then, our conference comprises the following officers of the medical societies of New York, Pennsylvania, and New Jersey: ex-presidents since 1925; president; president-elect or first vice-president; secretary; executive secretary; editor of the State Society Journal (in New York the editor-in-chief and the executive editor); and the chairman of the board of trustees.

At the commencement of our second year, it was decided that we should hold three meetings per annum, as follows: One early in November, because each society has then gotten started upon its active season of work; one in February, because, as a rule, that is about the middle of the term of state legislative bodies and we can confer, if necessary, upon pending legislation; one in May, to take account of the year's work. Inasmuch as the first, second, and third meetings of the conference fell by chance the first year to New Jersey, New York, and Pennsylvania in the order named, we have continued to follow that order in the assignment of meeting places, permitting the officers of each state society to determine the program for meetings held in its territory and expecting the president of each state society to preside over meetings held in his state. That there should be some one to serve as a link between the conferences, to carry on from one session to another, to assist each presiding officer in the preparation of his program, and to keep permanent records of proceedings, a secretary to the conference was duly elected.

Such is the purpose of the conference, the form of organization, and the plan under which its work has been conducted.

The topics considered at the twelve conferences held during the past four years, the names of the authors of the papers presented, and references to the volumes and pages in the *Journal of the Medical Society of New Jersey* where these papers and the attendant discussions have been published in full have been listed. At all our meetings we have had an expert reporter to record the proceedings and the report so taken has been edited promptly so that mimeographed copies could be made and sent at once to all members of the conference. The proceedings, when assembled for the first five years, will make a book in which we shall have a very thorough consideration of the most important problems that have confronted our state societies during this period of time.

What has been the effect of these conferences and to what extent has each state medical society benefited from them? In so far as New Jersey is concerned, we believe that these conferences have been highly beneficial. Perhaps an estimate of results can best be made by referring to each special topic that has been considered and endeavoring to trace the effect of that discussion upon local conditions.

(1) "Medical Practice Acts," "Uniform Medical Practice Laws," and "Administration of Medical Laws," are the titles of three of the papers read and discussed. We regret to say that our efforts to settle the dispute between the examining boards of Pennsylvania and New Jersey have not as yet borne fruit. At least twice we have thought a solution of the trouble had been found, but each time something has happened to throw those boards back into conflict. The discussions, however, have not been entirely without effect, and we are probably justified in saying that the officers of the New Jersey State Medical Society are favorably impressed with the main features of the Medical Practice Act of New York and are only awaiting suitable opportunity to seek the enactment of similar legislation in this state.

(2) "The Nursing Question," which was discussed at two sessions of the conference, is everywhere, not only in these three states, still unsettled, and while we have gained something from the thorough discussion of problems therein concerned, we cannot as yet claim any great benefit to any society.

(3) "Abolition of Diphtheria." Taking advantage of what we learned from Dr. Lawrence's two papers on this subject, New Jersey inaugurated a state-wide anti-diphtheria campaign that is progressing very satisfactorily, and we feel that the information gained through this conference enabled us to put on a campaign with less labor, with less cost, and with greater hope of success than we could possibly have done without the attainment of such knowledge.

(4) "Periodic Health Examinations." This work moves slowly, exasperatingly so, but we profited by the discussion of that subject because it saved us from waste of effort in directions that had already proved futile, and guided us into smoother channels. The exchange of ideas and plans bearing upon this problem was helpful to us, at least.

(5) "Workmen's Compensation Law." At the conference upon this question, it appeared that New Jersey had something to give, that this state was well in the lead with a reasonably satisfactory law which was being exceptionally well enforced, and so while we gained nothing particular from that conference, we hope that we contributed something of value to New York and to Pennsylvania.

(6) "Voluntary Health Agencies and Public Rela-

tions Committees." In this matter we were all working along similar lines but we in New Jersey profited considerably from the free, frank, and extensive discussion of these problems by the conference. From such discussions we drew some new ideas as to mode of procedure, and much stimulation from the knowledge gained that we were working along lines endorsed by so large a proportion of the profession. We have a very active state society public relations committee, and now have public relations committees in most of our county societies. We hope to have effected the establishment of a similar committee in every one of our counties before the end of this fiscal year. We have profited largely from the experience of our neighbor states in this matter.

(7) "Graduate Medical Education." This has been for New Jersey a much more difficult problem than for either of her neighbors for this state has no medical colleges or medical teaching institutions. That excellent paper, however, contributed to the conference by Professor Meeker, and the county experiences reported by Dr. Gordon, have ultimately borne fruit. After several trials at constructing graduate courses that might be carried to our county members, we have finally made a coalition with Rutgers University whereby that institution of learning will conduct university extension courses for which the medical society furnishes the instructors and the hospitals that will serve as teaching centers. The plan is to be inaugurated next month and we believe we have worked out a feasible plan of providing graduate study, at low cost, to isolated physicians.

(8) "Expert Testimony." One conference resulted in devising what might be called a model law that we would like to have enacted in the several states. Actual adoption of the law has not yet been obtained, but we have advanced far enough to have had the ideal law endorsed by the state medical society and by the state bar association, and though it failed of passage at the last session of our state legislature, it is probably only a question of time when it will be enacted into law. The conference could not pass the law but it did give us something definite and idealistic for which to work.

(9) "State Control of Private Hospitals." Discussion of this question disclosed the fact that in all three states there existed a parlous state of affairs. Thanks to the consideration given the question by this conference, New Jersey now has a law such as this organization recommended. We have had the good fortune to have at the head of our State Board of Institutions and Agencies an enlightened administrator, and the medical profession and the people of New Jersey owe Commissioner Ellis a debt of gratitude for securing state control of all hospitals. That is one excellent piece of work that resulted directly from the deliberations of this body which discussed the problem at the instance of Dr. Morrison.

(10) "County Societies and Their Opportunities." Two of the most interesting sessions we have held were devoted to consideration of developing the component county medical societies, and the effect of our discussion has been very marked. It stirred up more activity in the county societies of this state than has any other one thing during the past five years. Among other things, we have adopted the Pennsylvania custom of holding an annual conference of our county society secretaries and reporters, and the first effect of that has been to stimulate those officials into greater activity. If the conference had done nothing else in these four years than to discuss so thoroughly that question and the question of state society journals, it would have proved its inestimable value.

(11) "Journals." As we have just referred to the meeting at Pittsburgh, where we discussed "The Ideal State Society Journal," we need only say in addition that we keep Dr. Hammond's paper constantly before us and continue to hope that we shall some day attain to the ideal he set before us. We have already made some changes in our Journal, and with the January issue will introduce others in our effort to measure more closely to his standard.

In conclusion we would express the belief that through these conferences we have gained much from the contributions made by New York and Pennsylvania, and we trust that we have contributed something that may have been of value to the medical societies in those states; at any rate, we desire to offer our thanks for the benefits that we have derived through this organization.

Discussion

DR. WILLIAM H. ROSS (President-Elect of the New York State Medical Association): In discussing the results of the Tristate Conference I am approaching one of those difficult things that I have sometimes been thoughtless enough to undertake. In preparation for it I have read all the records, papers, discussions, and correspondence of all of the conferences (including the recent correspondence relating to the *New York State Journal of Medicine*) from November 7, 1925, to May 25, 1929. The complete records give me a complete picture.

Generally, in any conference, if one looks for the settling or closing of any subject while the factors of which it is made are changing, he is likely to be disappointed. If one sees the results, however, just as stepping stones in the evolution of medical relationships due to the developing public character of medicine, the public demand for a health program, and in the light that we as members of a profession owe to the public and to our profession, then I think that we can find a good deal in these conferences.

Some fundamental things have been discussed and some of these have not been and could not be finished because the factors are changing; e.g., the necessary relationship between medicine and health agencies; what constitutes an ideal state journal; and there are some others that could have been discussed—proper management of the income of a society in the sense of true economy, real business management considering expansion, and what further use can be made of a board of trustees, postgraduate education, and better organization for better county health. These are developing subjects. There are others that are hardly worth the time because not much can be done about them and what there is does not belong to this unofficial conference.

The work of this conference is similar to a chamber of commerce where private individuals in their private capacity, working as a group, develop new things and pass them on to the proper governing body for consideration and conclusion, thus accomplishing results by supplementing the governments of our respective organizations of organized medicine. It is not worth while for this body to do very much to advance certain studies already taken up elsewhere unless more time is given to preparation for discussion than the records of discussions indicate has been given, and while other means exist and other committees, with large resources, are actually at work. There should

not be taken up problems peculiar to one state alone unless they wish a mere consultation.

There are apparently some continuing differences of opinion that ought to be ironed-out if the conferences are to go on and attain their highest usefulness. One is the publishing of the complete records in the journals, or an abstract of them. If there had not been a complete record, I would not now be discussing these conferences. I am quite interested in the quality of the papers that have been presented and in their practical value. The New York State Society Journal has given only about two pages of space to each conference report, while the Pennsylvania and the New Jersey Journals have given as many as eighteen pages.

The conference should get down to fundamental problems as soon as possible and it could well direct its composite mind to the relationship of health organizations of all kinds, on one hand, to medicine on the other. This relationship has not yet been accepted by the mass of medical men as having emerged from the stage of controversy into the stage of coöperation. A good deal of time has been spent on relatively unimportant subjects. Too many subjects have been undertaken. Many men in discussions have been apparently satisfied with the inspiration that they received. They said so anyway—whatever that means. One wonders just how much use has been made of their inspiration when they got back home to their own medical societies.

There has been so much rapid progress in medicine that the new knowledge has not yet been made available generally to those who cannot buy it because we have not assisted the thinking public to organize better means for the practice of public health and prevention of disease. Right here is an opportunity for conference. One wonders if this is not the most fundamental task that we have. Then, there is another like unto it—improvement of the state journals.

If it is true that the purposes of organized medicine are to promote the science and art of medicine, to enlighten the public on the great problems of medicine, the betterment of public health, to provide opportunities for medical education, to diffuse among the people knowledge of the achievements of scientific medicine, and to aid and conserve the public weal by participating in all proper medical civic efforts, then these conferences have not hewed as closely to the line as they should. Favorably constituted as they are of a small number of men who can be supposed to represent the essence of leadership in three states, there should be grasped more certainly than there has been the practical ideals of the medical profession, the fundamental principles of practical postgraduate education, the need of understanding the social aspect of modern medicine, medical relationships and betterment of public health, and leave all the other questions which are mainly economic to the various states to settle for themselves. These, gentlemen, are the things that the profession is approaching and sooner or later they will demand major consideration. Some of the subjects that we now spend time on will be settled by other agencies or will in time settle themselves; e. g., expert testimony has been talked of in organized medicine for years and years. I find articles written on it fifty years ago in New York State. Its interest is minor compared to those that I have named, and anyway, it's a matter for the Bar Association even more than medicine.

It is blindness not to see that business, industry, and government are wiser than we are in their efforts to establish desirable relationships. We have plenty of leadership but we do not always coördinate that leadership enough to make the results of conference under such leadership of general availability to our own states. Surely these conferences can think out some scheme to do this.

It is not becoming for these conferences to spend a great deal of money. They are unofficial meetings. I served as trustee of the New York State Society for three years, resigning last year to do another piece of work at the direction of the House of Delegates. I am on record as severely criticizing, as a trustee, the expense of the last conference held in New York. We should not belong to the class that believes in spending other people's money in any other way than we would spend our own and also in a way that could be told the membership. The amount spent by the New York State Society at the conference on February 2, 1929, is not likely to be repeated at the expense of that state society. I find in the records that an effort was made in the beginning to have the cost $100 or less a year for each meeting. That means $100 or less a year for each state. That would be considered a proper expenditure, I believe.

Probably it would take more wisdom than I have to work out the apparent situation between the Tristate Conference and the *New York State Medical Journal*. I wonder if it is true that "practically every other state medical journal has been criticizing the New York Journal for its publication of certain advertisements and its independence in severing its connection with the Coöperative Medical Advertising Bureau." What else is wrong with the ads. in the New York Journal? Somebody ought to be able to tell us specifically. We concede the possibility of the other state society journals criticizing us. All forward steps throughout history have been at first largely condemned. Who shall judge? Nothing new in medicine has ever at first been accepted. I do not wish on this occasion, however, to discuss this subject or enter into controversy.

The address of Dr. Hammond, on "What Constitutes an Ideal State Society Journal," is almost a textbook on the subject. "The Peculiar Field of the State Society Journal," by Dr. Overton, has much in it of great value though it is also a good deal of a study of what a medical society should do. I would put this subject on the program again—no more papers but as a round-table discussion—so as to try to reach conclusions that would be of value to each society represented instead of leaving the subject up in the air and no way in sight as to how to get down to earth again. Surely, no group represented has a closed mind on the subject. If they have, however, no more conferences are necessary. I cannot get over the thought that this subject—state journals—is almost the biggest problem before the profession and that this conference has an opportunity, representing as it does so large a part of the profession of the United States. I have read in preparation for this talk every word of these papers by Drs. Hammond and Overton—all the discussion and all of the acrimonious correspondence. If this whole matter cannot be adjusted, it impairs the value of other conferences for any other subject, and stamps us as men different from what I think we are. If every editor believes that he has the best journal, then let us never discuss journals again. If some want a cover and good paper and do not want advertisements on the front page, and others do, then that also is a reason for not touching the subject of journals again. Whatever the plan may be—the kind of editorials, how far an author may go before he violates the policy of the journal, where the journal shall get its advertising or what

agency it shall use—if it cannot be agreed upon, then let us waste no more money or time on this subject. If the editorials shall represent the views of the editor or the views of the organization or the articles come to a standard and we cannot agree, then let us talk no more. There is no division of opinion on what indexing should be, though some is good and some is poor. These papers by Drs. Hammond and Overton give all the text needed for a conference, but if out of it all we find nothing to improve our respective journals, then there will be no use in discussing this subject any more.

Suppose we ask each editor to write five hundred words on the model journal and submit them to the conference and then exclude the editors from the discussion. I am interested in these two papers. I still wonder why you people have not gotten together. You agree in the big essentials—that a journal shall record the activities of the state society and the county society and that it should command reports from each county society and the coöperation of officers and the heads of all committees, without exception. Then there should be proper indexing so as to make all this material accessible; all this is agreed upon.

Under coördinated leadership these three states should be able to see the great problems of medicine and should be able to stick to a discussion of them, one at a time, until a conclusion is found that all can accept. The programs should almost spontaneously appear. The big things in medicine should crowd to the front almost of their own accord. The practical application of professional ideals in medical relationship, in graduate education, in the betterment of public health, and in medical journalism, should give these conferences all that they can do. If it is not thought that these are the problems in medicine, then let us find out what are the problems in medicine and then devote ourselves to finding an adequate plan for their solution. It is hardly enough to keep interstate conferences going to discuss problems that can better be done elsewhere or even by other organizations.

I have carefully saved for the last a quotation from an editorial that appeared sometime ago in the PENNSYLVANIA MEDICAL JOURNAL: "The value of these conferences depends upon how much can be carried away from them." Let us apply this test, perhaps putting it on the program the next time—giving some round-table discussion to it—so as to take a sort of inventory and see where we stand regarding what has been done.

In conclusion, I want to say that friendly conferences will solve more things than any amount of intemperate argument or sharp letters will do and a far better result will be reached. There is a place for these conferences if they are kept away from problems that are being studied better elsewhere and kept away from becoming just medical meetings, and just considered as consultations.

DR. WILLIAM T. SHARPLESS (West Chester, Pa.): Postgraduate education, carrying instruction to distant parts of the state, is of great value. Most of us live in or near large medical centers where there is every opportunity for us to familiarize ourselves with what is going on in medicine, but many physicians in our state live in isolated places and are hungry for new medical knowledge, and up to the present time no successful plan has been devised by which they can get it. The University of Pennsylvania undertook sometime ago to organize classes in the various medical societies and to send instructors to them. I think that has been largely a failure. Dr. Reik has suggested a plan proposing that Rutgers College, coöperating with the Medical Society of New Jersey, shall give postgraduate instruction. In some places, particularly in Wilkes-Barre and Scranton, it was attempted to have this instruction furnished by the University of Pennsylvania but that has been given up and they have organized their own school, a sort of Academy of Medicine, largely attended by their own members, selecting their own instructors, and these organizations have proved very helpful. No plan has yet been reached whereby we can take the instruction to the remote parts of the state and give the men who need it most the opportunity for participating in and gaining up-to-date knowledge about medical matters. No plan occurs to me by which this is possible. It depends largely, I suppose, upon the person. If they wish to avail themselves of certain advantages they can do so, although at a large personal sacrifice. I think that would be a good subject for discussion in these conferences—how to get postgraduate study to the men who need it most. They are unable to leave their practice and go off for months at a time to obtain special instruction on these subjects and it should be brought to them.

Lay organizations exist in large numbers, they have many members who are interested in promoting public health, and they have very influential backing. We should not assume an attitude of antagonizing these lay organizations. In fact, we cannot afford, nor can they, to place ourselves in antagonism to anybody working to promote public health. They have taken it up largely because the doctors had laid it down. We should direct the work of these organizations, so far as the administration of their affairs is concerned, and coöperate with them fully. I know some of them are very unwise, and exasperating, and some of their enterprises quite unnecessary, but the fact remains that they want to promote the work of public health and the medical profession should try to coöperate with them in every possible way.

DR. JAMES N. VANDER VEER (Albany, N. Y.): We have apparently covered, as Dr. Ross has said, a number of subjects, some of which are very near to us and some of which I believe are individual questions within the states and which a conference cannot discuss with quite as much satisfaction as they can some other subjects. I should like to enunciate one thing which comes closest to me and that is, if we could arrange a program for three successive conferences—to take up this question of "county society work," and how the state society can aid the county society—it would be most helpful, because that is the nearest organization unit to the individual doctor.

In my travels through the state of New York recently I found these conditions in two of the county societies: One town in Broome County, which is at the southwestern end of the state, had more members present that night than ever before and there I ascertained that their uppermost question was economics. They wished to have that discussed. The following night I was in the northwestern part of the state, with a county society which had not held a meeting for over a year, and it was stated that they had a hospital in their largest town of perhaps 18,000 inhabitants, which was compelled to hold a meeting because of the College of Surgeons and the American Medical Association. This meeting superseded the county society meeting, but many physicians of the county were not invited.

Postgraduate work is a side-line. We are all attempting that in the different states.

It might be of interest to bring up the factor of the relationship of the doctor to these newer types of hos-

pitals that we are about to see organized in New York State, the county hospitals under direction of our Department of Health. We have one county with approximately 20,000 inhabitants, and they have just voted at this last election for a bond issue to raise $80,000 which will be augmented by $80,000 from an appropriation of the Health Department. With this money they will build a hospital in that county, to be governed—how? That is a question that is now being thrashed out. We still have five counties in the state that have no hospitals. Very shortly those counties will be asking what will be the attitude of the county society in that county where the hospital is to be established, and how will the individuals of the medical profession there enter into the care of the sick? I think that matter could well be taken up for discussion here.

I believe that we should emphasize it once more as a principle of this conference that our reports should be published in full in each journal. You in New Jersey do publish them fully, Pennsylvania occupies a middle position, and we perhaps occupy the other end. We officers are handicapped when, for instance, I hear this criticism that down in Broome County they want to know what they are doing up in the other end of the state. We cannot get them to read the journals. You in New Jersey have reporters, fortunately, who furnish good reports of your county society items. We have not adopted that in New York State. I have tried to get the secretaries there to send excerpts to our Journal; I have discussed it with the executive editor and the editor-in-chief of our state journal, but we have not arrived at a point where we can get the enthusiasm of the county to send in a report. There are so many things going on which the individual physician has not had brought home to him by publication and he does not know what the hierarchy of the state society is doing in connection with other state societies; which would not be true if these notes were published in full.

We have had two textbooks, Dr. Ross says, issued to us from this conference. They have been well worth while, but I fear have not reached the individual members in each state represented here. I do not know how much you have had it under discussion in your two states, but I know that it has not touched the individuals in the state of New York, except in very rare instances; and they ask again what the state society officers are doing in conjunction with other states? I think space should be given to this in the journal even though it be read by only 10 or 20 per cent of the members of the society, for it will instruct them to a very large degree as to what is going on, and they will know before they come to the annual meeting.

I think we might well take up the subject of county work and we might also give our opinions on the management of individual state societies, and let us have a round-table discussion giving our experiences of the past year on the problems that have confronted us. We might set this aside for another year, planning ahead in that way, for I think we have had in these conferences rather a hit-and-miss program. Undoubtedly these conferences have been of great interest to all who have participated but we have not set up a definite program, so that we know where we are going.

Dr. Ross V. Patterson (Philadelphia, Pa.): I came to this meeting with the expectation of familiarizing myself with the views of medical leaders on the activities of organized medicine. I have been much interested in Dr. Reik's paper, which is most illuminating as regards the purpose of these conferences and the subjects which have been of interest in previous meetings. I fear that anything I would contribute might be threadbare and might deal with some matter already thoroughly thrashed out. Notwithstanding this view, however, I venture to offer a few comments on medical practice acts and to say that it seems to me the time has come when there should be a general revision of medical practice acts in this country, and I believe that this revision is already underway. My reason for believing that such revision is desirable grows out of the contemplation of the origin of medical practice acts themselves, and conditions as they were at the time those acts were first formulated.

If we go back to the period following the Civil War, previous to which medical education and medical practice in this country had been fairly satisfactory, we find elements that disrupted medical education more or less, and also as a result disrupted medical practice. The rapid migration of foreigners into this country, the rapid increase in population therefore, the rapid settlement of the Mississippi Valley, produced a population and a frontier development that overtaxed the medical educational resources of this country. As a result there sprang up, particularly in the Mississippi Valley, a number of so-called medical schools which were nothing more than commercial institutions organized for the purpose of profit from students instructed or from the indirect advantage which came to those who controlled the schools. As a result, there was thrown into the practice in a wide area many imperfectly educated, incompetent practitioners. Then, of course, followed the necessity for regulation, the necessity for determining qualifications of those who entered the practice of medicine, and out of that situation grew state boards the purpose of which at first was chiefly to be police boards, to decide questions of licensure and regulation. Most medical practice acts were based upon the necessities of those times. Most medical practice acts of today are modeled along that line although conditions have changed. Medical education is no longer a problem. The recent graduates of the medical schools of this country offer no problem as to qualifications. The need of medical boards to scrutinize medical students has passed. The method should now be different; there should be some method of free reciprocity. The real problem now is the regulation of those in medical practice, the revoking of licenses, the disciplining of irregulars, and the most dangerous irregular of all is, of course, the licensed irregular.

This, I believe, is the background which shows the need for revision of medical practice acts generally with a different conception of their purpose from that which existed when they were first formulated. The machinery is already in operation to bring this about. At the meeting of the Federation of State Examining Boards in Chicago last February, a resolution of considerable consequence was passed calling upon the Association of American Medical Colleges to assume the determination as to the adequacy of education of those who might appear before state boards, leaving such boards free to deal more with problems concerning medical practice. The association at its meeting in New York, November, 1929, after considerable discussion, has agreed to undertake that duty. That brings about, if this coöperative endeavor is successful, an entirely new situation and the medical practice acts should be redrawn and in their redrafting the views of organized medicine should be considered: How best may irregular practitioners be controlled; what are the conditions under which medical licenses should be re-

voked; how deal with the irregular unlicensed practitioner; what, after all, constitutes the practice of medicine; what is a satisfactory definition of the practice of medicine after our forty years of experience with medical practice acts, and in many cases before the courts, etc.?

Here again we lead on into some of the problems that grow out of these medical practice acts, such as the difference that exists between the State Boards of Licensure of New Jersey and Pennsylvania, an attitude which is deplorable and wherever the fault may be the results are deplorable, most of all I should say for the citizens of New Jersey. In the operation of these medical practice acts of the two states it results that a medical student from the state of New Jersey who is a graduate of Princeton or some other university of New Jersey may have attended a medical school in Philadelphia and at the end of his medical course he is not free to enter one of the large hospitals of Pennsylvania under the threat of the New Jersey Board of Examiners that they will not recognize his service in that hospital—not because the service is not a good one but because of the difference of opinion over a technical matter of administrative detail of the Pennsylvania Board of Medical Education and Licensure. That results in an injustice to the citizen of New Jersey if he should enter a Philadelphia hospital, in that he would be excluded from practice in New Jersey, and it operates to the disadvantage of New Jersey in that it deprives the state of the services of a well-trained man not only in his technical medical school but his hospital experience as well. I believe, therefore, that is one of the most important things before the medical profession of all our states, a revision of the medical practice acts, and in such revision there should be a very careful consideration of many details with an appreciation of and alteration in fundamental conditions of medical education and medical practice.

DR. J. B. MORRISON (Newark, N. J.): This has been the presentation of an outline of what has been attempted to be accomplished by this conference in the past five years. Before the birth of this conference the subject matter was given considerable thought for a period of four or five years and the hope of Dr. Reik's heart and mine—that from some such conference among the leaders of medical thought, representing twenty per cent of the medical profession in America, conclusions might be reached that would be of vast benefit to organized medicine all over the United States—is confirmed by his résumé, which shows that the dream may be realized.

I have been deeply impressed by Dr. Ross's keen, judicial analysis of what we have attempted to do, of the loss of time and effort, and what the future should outline for accomplishment. We are fortunate indeed to have brought before this conference the results of such a keen, judicial analysis. As no progress is made without mistakes, so we have made ours.

The criticism has been made that the programs have been disjointed, through a mistake of ours in allowing the officers of each state to select their own programs. We can see from today's discussion that there has been an error, that the accomplishments we expect to secure should come from a concerted effort to control this program and to inject into it only such matters as will be of common interest to us and will lead to securing results that will further the interest of organized medicine, that will raise the standard of the medical profession, that will elicit the appreciation of the medical profession by the public, and that will assist the medical profession to enter into these vast and numerous schemes for the betterment of public health that are being promulgated today and that are earnestly seeking direction and leadership. One of our greatest problems is so to present to the members of our profession the ideas of idealism, ideas of duty to the public, of what they owe to the citizens of each state, apart from the cure of disease, a keen appreciation of all that is expected of us in these modern days of medicine in the line of education, direction, and leadership, so that in the end our medical profession may get back to the highest standard of respect which it enjoyed forty or fifty years ago. I may say that out of these conferences in the next ten or fifteen years some of these hopes of ours may be attained. I assure you that it is with keen personal appreciation that I grasp the enormity and the influence and the far-reaching effects of such a conference to the members of the medical profession of these three states.

A few years ago I presented, at the meeting of State Society secretaries at Chicago, a digest of what had been accomplished here and I had a letter from Dr. Olin West saying that from the mass of literature that comes to his desk each month he reads with marked interest every word of every paper and discussion of this Tristate Conference. The effect of the accomplishments of this conference as told there was very marked and the editors of ten or twelve state medical journals said that they wait with expectancy and hope for ideas that are presented to them as a result of this conference. Already, in the New England states, a similar conference has been organized; and I understand that others are contemplated in the western states. I believe that in the future we shall see enormous benefits result from the work that we are so conscientiously trying to put forth in these conferences.

DR. WALTER F. DONALDSON (Pittsburgh, Pa.): I wish to compliment Dr. Reik for having reviewed so painstakingly a history of this conference, and as briefly as possible to express my gratitude for the number of meetings which I have been able to attend. I have always come to them in an open frame of mind, looking for suggestions, be they ever so slight, that might be helpful in my work as secretary to the Medical Society of the State of Pennsylvania, and I believe that coming in that frame of mind it has been with a different approach from that in which Dr. Ross has attended any conference or in which he may have reviewed the discussions of the various conferences which he did not attend. In no way do I intend to criticize Dr. Ross; in fact, I mean to congratulate him, because I always feel refreshed by one who will take issue with an essayist. I fear in most medical discussions we too often neglect to express what we may feel is the truth, and I again compliment Dr. Ross for having opened our eyes to what are possibly weaknesses. At the same time, I challenge any one to point out any conference or any organization that ever, over several years of time, has not indulged in some waste of time and effort. I always come looking for some suggestions that will be helpful to any one of our county medical societies, and have always gone home with some ideas that I deemed worth while, and as I have taken something of that sort home to help our county societies I feel that the small amount of money expended in bringing me here has been a good investment.

I am expecting today to learn much from the presentation that we are about to hear regarding public welfare work by the New Jersey State Medical Society, because we are sorely in need of it. We are very much

in need of all the help along that line that we can get. We have gained much from hearing what has been done in New York State under Dr. Sadlier's direction. I would call attention to the fact that Dr. Sadlier is here again after several previous visits, showing that he feels the conference has been really worth while.

If I might interject a little note in the discussion regarding the differences between the State Medical Boards of Pennsylvania and New Jersey, that has a little different angle, I should like to say that I am a member of the Medical Council of the American Medical Association and while the efforts of that Council to help in the development of all these educational and hospital problems had been largely a matter for the executive secretary, Dr. Colwell, up to the last three or four years, since then the Council has received a large enough appropriation from the A. M. A. to employ two full-time physicians who now relieve Dr. Colwell in that work. These men are experienced and well trained in what we believe to be proper equipment not only for medical colleges, but for hospitals for intern teaching. Here are two well-trained physicians who might be offered as referees to help overcome any differences that exist between these two state boards, because that seems after all to be the fundamental need.

DR. JAMES E. SADLIER (Poughkeepsie, N. Y.): As Dr. Donaldson has just said, I have never attended one of these conferences without carrying away with me something that I could use, that would be beneficial to my own particular state, both during the period when I was president of the state society and now as chairman of the Public Relations Committee.

I had never hoped to get ahead of my friend, Dr. Reik, on any one particular thing, but I should like to announce to him that I *already* have a bound volume of the "Transactions of the Tristate Conference" up to the present time.

For my discussion, I should like to take up that part of Dr. Reik's paper which speaks of the voluntary health agencies and the public relations committee. I think that same thing applies to each of the three states interested in this conference. If New Jersey has profited with reference to that one particular thing, we have profited in New York in some other direction, and I hope that Pennsylvania may have the same story. With reference to what Dr. Ross has said, I agree with him absolutely that we should take up the matters he mentions.

I am impressed just now with what a lot of time we waste in our state society and our special committees. My public relations committee during the past three years has wasted a large amount of time in ferreting out through a questionnaire a certain problem relating to compensation work in the state of New York only to find that the suspected condition does not exist. Perhaps we have wasted the time of certain men in high official positions on a particular subject that we were investigating, but by wasting this time, so to speak, we have run the thing to earth and determined that we have no such problem; thus our work is quite worth while in the end.

At the present time we are faced with a new condition in New York. Two years ago, in my report to the House of Delegates, I mentioned that there were five rural counties that had no hospitals, that those counties necessarily could not deliver good curative medicine and could not expect to be very active in the field of public health and prevention of disease. I am delighted to say that today three of those five counties are in line for the development of general hospital headquarters. In the development of such hospitals we are practically coming to the question of state aid to the rural hospital in counties that are rather weak financially. We of the Public Relations Committee are endeavoring, largely through a study that we have made of state aid to general hospitals as worked out in the state of Pennsylvania, and to a certain extent as practiced in North Carolina and South Carolina, so to arrange the administration of these hospitals that they shall be a benefit to the community and also a distinct benefit to the medical profession of those counties. Even my confréres from New York State do not know about this at the present time, for it was a conference only the first of this week. The commissioner of health of New York told me that along the line of this development of state aid to the general hospital he had dug up an old law in New York State which made it obligatory that if such hospitals were to develop they should have a governing board of five from that county, not specifically mentioning that it should have any physician, and the commissioner said to me: "That is not right, doctor; that must be changed in the legislature so that there will be two or more physicians on that board." I thought it was very nice to find that our governmental agencies in the state would think that there should be proper medical recognition.

I wish to reiterate that I have carried away from each meeting something of value to my state society.

DR. JOSEPH S. LAWRENCE (Albany, N. Y.): As one of the five "charter members" of this organization present today, it is very stimulating to have the opportunity of seeing ourselves "as ithers see us." I am not disappointed nor particularly discouraged in the accomplishments of this organization. Fundamentally, it was established for the purpose of disseminating information. That was really, as you heard Dr. Reik say, what the organization was intended for, to give one another information regarding opinions upon certain questions, and have discussions regarding matters in the different states or state societies. The second function was one of acquaintanceship. I wanted to know Dr. Reik and Dr. Hammond. Some of you will recall the quotation: "Those whom I distrust or cannot count my friends are those I do not know." To know a man is usually to make him your friend. That this is working out in these three states, I think can be concretely demonstrated. Prior to the organization of this conference we had, so far as I can ascertain from the records and from my own personal experience, no interchange of medical men aside from the purely scientific meetings. But now, in our several conferences, men have been invited from one state to another, such as in your recent conference of New Jersey County Medical Society Secretaries. We are beginning to interchange opinions with regard to the practice of medicine aside from the purely scientific aspect.

As to the definiteness of a program, I appreciate to the fullest extent any disappointment or discouragement that any person might have experienced who attended these conferences or who has read reports of them, but how can it be otherwise? We are three individual communities and we have our traditions (and they are powerful) that we are living by and limited by. We are thoroughly imbued with those traditions and we try to meet a problem which is common to all of us but each of us sees it through his own colored glasses,

and often forgets that the other fellow has a different colored glass. We tell our story and feel that each individual has contributed something and then go home. Now right there I think is the greatest weakness of our conferences. We have indulged in too little general discussion. Apparently we have let our conferences run into papers which have been read, a few complimentary remarks are made, and we go away. I do not believe it ends there. Those of us who have been here think the matter over and more or less incorporate it so we can use it in our own communities. I know that has been true with me; and with you because I see it in your own states. At the time of the conference, I believe it would be better if we limited ourselves to a short statement of some question and then discussed it in a round-table manner.

It is very difficult and discouraging to those who have presided to note the manner of discussion and how frequently people go off on tangents. I might refer to my last paper regarding the county society. I thought I would get a lot of discussion on that subject but I was later disgusted to think of what happened to that paper. I purposely made it short and threw out a number of suggestions for the sake of argument. I got no such response. A number of people discussed it, some hewed to the point but some went wide of it, relating personal experiences, etc. I believe we could improve this by coming right to the point.

Looking at our programs, I see that we discussed the Medical Practice Act at the first meeting. That was highly profitable. I wonder how many of us know which are our several state medical practice acts? How many New York men have read the New Jersey or Pennsylvania Acts? Do we know what the other states have? The conference on that question gave us some knowledge of the differences that exist.

The nursing situation is a common condition over all the United States. It has not been solved, but we now know what our common situation is. We did not improve the condition in New York State. It is just where it was before in one sense, and yet it is not, because the state officials have a different attitude about the matter since our discussion. You can find in New York at the present time an effort to revise the curricula of nurses' training schools, and it will be along the line that we outlined at our first meeting. It takes time to get those things across. After all, our discussion is simply an interchange of ideas on how things are moving. Now they are moving along that line in New York, knowing that they have the stimulation and backing of these three societies.

We all profited by knowing what was going on in graduate medical education in other states. We thought New York had the ideal system until we heard it discussed in Pennsylvania, and we then modified it somewhat in our state. We employed medical educators to go throughout the state but not in the way that Pennsylvania did.

We have not gotten far with periodic health examinations. Dr. Vander Veer is telling the people in New York State a way that he has made it work, and he has the right idea about it.

We of New York have learned a lot about group insurance. We believe that we have a good method and are more convinced when we learn what some other states have. You are just as sure perhaps that yours is as good, but we are operating our system more intelligently now.

The discussion of the New Jersey system, as Dr. McBride gave it, helped us to understand the shortcomings of the New York Workmen's Compensation Law. They have not all been corrected but we are in a position to help correct them when the opportunity presents itself, and it will be along the lines that we worked out here.

The opposition to the Narcotic Act was discussed. The conference brought about immediate combined action by the three states and we had a response from our congressmen which we could not have gotten had this not been undertaken in a unified way. It gave the congressmen at Washington the knowledge that here we were combined in regard to that law.

We now have a combined notion concerning the approach to the voluntary health agencies and it has reflected upon those agencies. They are operating in their several states as a unit and we were operating as three units, but our agreement is now having its good effect.

My suggestion would be that the next program should reopen the question of state control of private hospitals. We have it in New York State as a living question. The New York county societies have discussed it, the Board has discussed it, and there is a communication to be given to our executive committee next Thursday from a doctor in New York State showing the same thing that Dr. Morrison expressed as existing in New Jersey in 1927. We should study this New Jersey law and see how we can benefit by it in New York. Our Social Welfare Board, in New York, has been wondering how it could reach the private hospital or the one that does not accept public funds. We may find something of benefit from the discussion we had here and the law that you afterward secured.

That brings me to another point—state aid for hospitals. When that subject first came up, Dr. Sadlier asked me to get in touch with Pennsylvania and see how they were conducting their state-aid program. He had learned about that from one of these conferences. We have made a study of it and presented it to the Commissioner of Health and there is no doubt that we will profit by the laws we have gotten from Pennsylvania through these conferences.

I could find something in nearly every one of those conferences that has been helpful to us in New York. I am speaking particularly of this community of interests that we are getting from all of these things. We are not any longer three individual states, but we are a community of one fifth of the practicing physicians of the United States. It is true the discussions have not gone out as far as they should have gone but they are with the leaders of medicine at the present time. Here are gathered the presidents, the past presidents, and the presidents-elect of our three states, and they are the ones upon whose shoulders the conduct of medicine is resting. They may here learn to know each other and that is worth while in itself, whereas we had no way to accomplish that before.

It was a great pleasure at our Eighth District Branch meeting, in Buffalo, to meet Dr. Metzger and Dr. Albertson with regard to establishing reciprocity. I feel certain that matter was largely stimulated through this conference. Dr. Albertson was present when we were discussing in this conference the reciprocity restrictions which we deplored. Pennsylvania physicians are now getting reciprocity in New York State in a much simpler and more concrete way than they did six years ago. Our State Departments of Education would not get together, but they finally took their suggestions from the discussions at this conference and they are certainly having a good effect.

Dr. Ephraim R. Mulford (Burlington, N. J.): Having just passed through the chair as presiding officer of the state of New Jersey, I feel that perhaps I can add just a word to say that out of this Tristate Conference we obtained so much material for discussion and dissemination to our county medical societies throughout New Jersey that to me, personally, it was a great help in the year's program just closed. I have never attended one of these conferences without taking home much meat for thought, and much food to sustain us in our public and organizational work.

One of the strongest points not definitely brought out today, as regards this Tristate Conference, although nearly every point has been touched upon, is the effect of this conference upon public opinion. Public opinion is the most powerful influence in America today and I find that all through our state, even in the small counties, the work and the progress that are growing out of our deliberations in these conferences are having a vast influence upon public opinion. For that reason alone I feel that these conferences have been greatly beneficial.

Dr. Frank C. Hammond (Philadelphia, Pa.): Pennsylvania is quite in accord with the conference plan, feeling that we have gained a great deal of value to our state societies and also to our county societies. The editor has endeavored by speech and writings to carry the messages from this conference to our various county medical societies. There is a great deal for an editor to write about. It has been my practice in the past few years, in reading the galley proof, to check off the matters of interest that would be of value to the trustees and councilors, and we mail a letter to each one calling attention to these features, and especially when the Tristate Medical Conference minutes are being published. The question arises very often, how to induce members to read the state journal. How many of our trustees read the journal through? Dr. Sharpless says that he reads it from cover to cover and in that way he has learned a great deal about general activities, and it has aided him in carrying much of benefit to his district. That seemed to me to be a very valuable feature so far as the trustees and councilors getting these matters of interest before the county societies is concerned.

Dr. Reik has covered very well the various conferences we have had and the subjects taken up for discussion. I am heartily in accord with Dr. Ross's suggestion for a round-table talk.

In regard to the medical practice acts, we are still very unhappy in Pennsylvania with the state board situation. Our trustees are very active in trying to bring about a more happy situation between the State Boards of Medical Examiners of Pennsylvania and New Jersey but we are just as far off as we ever were. I touched upon this subject editorially a few months ago and I understand that it provoked discussion at a subsequent meeting of our State Board of Examiners. One statement called attention to the fact that any student of a medical school who is anticipating taking the State Board examination in Pennsylvania would have to bear in mind the fact that he would have to serve an internship in some hospital that was approved by the Board; and they are advised to consult the Pennsylvania State Board before accepting a hospital internship to make sure that they would be eligible for licensure.

In regard to the abolition of diphtheria, we have given publicity to showing what was being done in other states, and the relationship of the State Department of Health to the local profession. Our State Board of Health takes the position that if the doctors did not take care of this situation they would have to do it. We finally carried the message to the doctors that the state is not trying to take their practice away from them, but that they would have to get on the job. The secretary of the State Department of Health in Pennsylvania feels that we have put this message over very well. In other words, the State Department of Health is not trying to usurp the practice of the profession but, unless they do the work, the Department of Health must do it and much has been done to overcome the lethargy on the part of the medical profession.

In regard to periodic health examinations, I suppose we are just as sluggish as other states. We are trying to keep the matter before our membership. One point may be of interest to you and that is the Woman's Auxiliary has taken up the cudgels. They have pledged that each member will have a periodic health examination before their annual meeting in October next, and that all the members of their household shall have a periodic examination. They hope in this way perhaps to do a great deal more than the medical members of their households have been doing. They have seen the necessity for it and have become very active in this particular movement.

We have not been able to get very far with the problem of expert testimony. Our State Bar Association has discussed it very strongly, and has taken it up with the American Bar Association. It is an unfortunate thing that one who is not competent to give expert medical testimony is permitted to enter any court and be accepted by both sides. Since both sides are agreed, the judges cannot interfere even though they do know in their communities those men who call themselves medical experts, who are not giving straightforward, honest testimony.

Some months ago a man in Pennsylvania, with a broken leg and a deformity, brought suit against his physician, alleging improper surgical care, and one of the medical men in Philadelphia testified against the surgeon in attendance. We took the question up with the surgeon, who is well known as a teacher, well versed in fractures and dislocations, and he told me that he was thoroughly surprised when he entered the court to find that suit had been brought against the physician. I cannot understand any man giving such testimony and not knowing the full facts of the case. He said he did not know the suit had been brought against a physician, and did not know that two physicians were being defended by our State Society. The jury disagreed at the first trial and at the second trial the councilor asked me if I would have a talk with the Philadelphia expert and see what his attitude would be. He said that he was caught on a hypothetic question which the lawyer asked. He had to answer *yes* or *no*, and of course his answer *yes* was derogatory to the medical men in attendance, but if possible he would not go up a second time. Recently, when the case came up for trial again, we were much surprised to learn that another physician of Philadelphia had gone upstate and testified against the physicians in this particular case; he had been out in practice less than two years, was absolutely unknown, and I have found since that he was not qualified to discuss dislocations or fractures, much less to give expert testimony. The jury again disagreed.

The county societies are always live wires for discussion and we have done everything, as the other

state societies have done, to carry the discussion right into the homes of the county societies because after all that is the rock bottom of our medical organization. The county medical society is the primary part of the medical organization, and not the state society as some claim. The county societies are the sheet anchors, the workers in the field, and unless we can get the message started with them we will not get far.

DR. REIK (in closing): As explained in the beginning, one of the reasons for preparing this résumé of the work of the Conference during the past four years was that some of you were not familiar with its origin and purpose, and I may say now that of the fourteen members present this morning eight have come into the Conference during the past two years. They would probably be unfamiliar with the origin of the organization, its plans, and what it has been attempting to do. That was evidenced at some recent meetings by discussions on the floor, and it seemed a sufficient reason to review the matter so that present members would know something more of what it is all about.

The second reason was touched upon in Dr. Ross's prepared discussion. I invited his criticisms today and I think they will be very helpful. Some of them will certainly be beneficial if we can adopt them. There are some of them with which I might take issue, but we will not enter into a lengthy discussion at the present time. He has referred to an acrimonious correspondence that took place within the past few years. That correspondence was intended to suggest to our New York members a way to make better use of the conference. I think it is unquestionably true that New Jersey has profited more by these conferences than have New York and Pennsylvania. That is naturally so in all affairs of life; when the poor members of a community enter into association with the richer ones, the rich have to give something while the poor are receivers. I felt that the New York State Medical Society was not getting value received for the money it was investing in this company. I suggested a means by which it might better profit, because we were profiting so abundantly by it here in New Jersey. Most of the members of the New Jersey State Society, at least those who read the Journal, are familiar with what the conference has been doing, but it is difficult to find a man in New York State, outside the society officers, who knows anything about it; and I know that because I have a good many friends in New York State. That was the reason for my suggestion.

I also had a fear in my mind that New York would not continue in these conferences with us. The presidents of the New York State Society and the presidents-elect have always been enthusiastic workers in the conference, but some other New York officers have not been. I was not unaware of the fact that the trustees of the New York State Society had discussed the cost of this conference and were wondering whether they were getting value received. Then came last year when three members from New York were forbidden to attend the conference held in Pennsylvania, lest their feelings might be hurt in discussing journalism, the subject to be on the program. They gave as a reason for remaining away, that some members of this conference had taken part in a discussion of journal advertising at a meeting of State Society Secretaries, held in Chicago under the auspices of the A. M. A. I am also aware that the House of Delegates of the New York Society last year limited the budget expenditure for this conference to a very small sum of money ($50). Dr. Ross referred to the cost of these conferences, and I would say that of the four meetings held in New Jersey, the first three cost less than $90 each, and the last one cost $145, because of the extensive discussion reported. Our society appropriated $150 for this year, and we will not expend it all. I am familiar with the fact that congress and the state legislatures have a nice little trick of passing bills and not passing an appropriation to carry them out effectively. So, despite the enthusiasm of the presidents and presidents-elect of the New York State Society, we feared New York might be dropping out and we cannot afford to lose any of the states. If any one state drops out, the conference becomes a nonentity.

I am delighted to hear nearly all of the New York members here today speak so enthusiastically about the results of the conference. I am particularly pleased that Dr. Vander Veer has so strongly emphasized the point I was making—of publishing all of these conference transactions, in full, in the state journals. That is the one thing that we feel has fostered such great benefit to New Jersey. Dr. Ross has raised the question whether his journal can afford that much space. It is an individual problem for each state to determine, but I am glad that Dr. Vander Veer feels that it is a worth while expenditure.

With regard to the programs, the secretary, certainly if he is to remain secretary, is delighted to hear that we are to have the programs arranged for us hereafter. Let me assure you that not a single program has ever been prepared by the secretary alone. There has always been more or less correspondence with the officers of the state in which the meeting was to be held, and the two particularly worthless topics referred to by Dr. Ross— nursing and expert testimony—were put on by New York.

The suggestion of Dr. Vander Veer that we devote one or more meetings to county society affairs is an excellent one. We did profit from those two meetings and I think it would be well to take up that subject again some time. Also, Dr. Ross suggested that the question of journals and journal management be put on again for discussion; I quite approve of it, and New York will have the opportunity to arrange such a program for the next meeting if her officers wish to do so.

Whether there has been any waste of time in the programs, I quite appreciate what Dr. Lawrence has said and I am sure that there has been no particular waste.

It has been pointed out that one of our first meetings took up the question of postgraduate education. Four years ago we tried to transfer to our state society what we had learned here. We failed then, but at the end of four years we succeeded and feel that we have now profited by the paper of Dr. Meeker and the report of Dr. Gordon. Some of the problems we discussed have not yet come to full fruition, but I do not think the time we have devoted to them has been wasted, for we may yet profit by some of that discussion. It requires time for some things to develop.

DR. ROSS: I think this has been an exceedingly wonderful meeting. To review the past, to see just what is underneath, and to dig it out, has been most valuable. It seems to me that it is rather a remarkable meeting. It is of very little value to go on with any meeting continually commenting upon the good things, just as it is of very little value for any one to tell of his successes, in a medical meeting, and never speak of his failures. In that sense, I think we are in the way of clearing up many things. Again, I want to call your

attention to the prepared discussion. I set down on either side columns of figures, not knowing how it would come out, and you have seen that it has come out rather in favor of the conference; so it seems to me that what we have done today has been more valuable than anything I have known the Conference to do heretofore.

DR. MCBRIDE: The next paper is to be presented by the Field Secretary of the Medical Society of New Jersey, and I have the pleasure of introducing Mrs. Taneyhill.

Public Educational Program of the Medical Society of New Jersey

ETHEL C. TANEYHILL

FIELD SECRETARY MEDICAL SOCIETY OF NEW JERSEY

Inasmuch as a period of five years has elapsed since the Medical Society of New Jersey first placed an authorized representative in the field of public education, that phase of the society's activities can no longer be regarded as experimental. It is frankly admitted, however, that the *modus operandi* is not yet crystallized, chiefly because the field has proved so large and the public so receptive that we have been obliged to adopt the apparently aimless progress of the ameba, pouring ourselves now into this and now into that exploring protrusion. And even as the ameba does undoubtedly acquire experience in its gropings, learning what it can engulf and assimilate and what it should let alone, so are we gradually forming convictions as to just where our reaching out will prove most effective.

In the belief that the development of the educational program, in so far as it has proceeded in New Jersey, might be of interest to you who have so large a part in molding the policies of your own state medical societies, we have accepted the invitation to present a brief review of our pioneer efforts in this direction.

I am told by Dr. Reik that when, in October, 1924, he assumed the office of executive secretary of the Medical Society of New Jersey, one of his several assignments was the inauguration of a campaign of public education. He says that he knew next to nothing about the subject, and received no instructions that would help in the establishment of such a program. His first effort was to ascertain what had been or was being done in the neighboring states of New York and Pennsylvania; and then to inquire about conditions in Illinois and California where, according to rumor, public education campaigns were being conducted. Very little help was derived from that investigation that was applicable to the situation in New Jersey, and it became evident that it would be necessary to start from the bottom and proceed according to local needs.

The activity of the cults, several of which were striving for recognition in the form of special legislation that would confer upon their followers the right to practice medicine without compliance with the existing medical practice act, determined the first step which was the enlightenment of members of the state legislature and state officials as to the standards and objectives of the medical profession. This was attempted by a series of letters to state senators and assemblymen, designating bills then pending, and explaining briefly but clearly why physicians opposed or approved such measures. That plan has grown into the present custom of regularly informing every member of the state legislature as to the attitude of the state medical society, with its 2500 members, toward any and every proposed act that bears upon public health questions. With each statement of approval or opposition goes an explanatory note setting forth the reasons for the stand taken by the medical profession. As a result of this policy, legislators have come to look for such information and even to use it in their arguments for or against acts under consideration—a very distinct gain for organized medicine in this state.

Coincident with his legislative work, the executive secretary attempted to reach the general public by every available channel. He secured state lists of Rotary and Kiwanis Clubs and of the women's clubs included in the State Federation. A circular letter to the secretaries of these organizations brought prompt responses from the men's clubs, possibly because the small-town club secretaries find it difficult to secure speakers for all of their weekly luncheon meetings. Very few of the women's clubs responded. At Rotary, Kiwanis, Lions, and similar luncheon clubs, Dr. Reik took advantage of every opportunity to explain the attitude of physicians toward matters of public health and individual well-being, emphasizing the importance of preserving physical fitness by preventive measures such as the various immunization procedures, and stressing particularly the advisability of periodic health examinations. It was of course emphasized that the family physician is the proper guide in all such matters. During the year 1925-26, Dr. Reik addressed thirty-eight lay organizations in addition to the twenty-one county societies. In 1926-27, he traveled 20,000 miles in the state of New Jersey preaching periodic health examinations to lay audiences.

In the second year of his work, Dr. Reik secured the privilege of broadcasting fifteen-minute health talks once a week from the Seaside Hotel at Atlantic City—station WHAR, which voluntarily went out of existence when the Government took over control of air channels—and each year since then he has conducted these talks on Friday evenings at 8.30 from station WPG, the municipal radio station of Atlantic City. Programs have been arranged well in advance, speakers being carefully selected with reference to knowledge of special topics of interest or import to the public; and the manuscripts submitted have been carefully edited before presentation on the air. If not convenient for the author of the paper to visit Atlantic City and broadcast his own speech, the actual delivery was performed by the executive secretary or his office assistant, Miss Mahoney. It was required that all papers must be submitted at least two weeks prior to the date of contemplated delivery, so that they could be reproduced by mimeographing and copies sent to all newspapers in the state with a release date to coincide with the hour of broadcasting.

This quadruple program has been carried on for four years: constant appeals and reports to the county medical societies so that each should be apprised of what the state society was doing in its territory; addresses to lay organizations of all sorts, in the small towns and villages and in the cities, wherever an audience could be gathered to listen to an explanation of the physicians' views concerning the safeguarding of health; broadcasting once a week, from November to May, some feature of the preventive medicine program of the state society; and, finally, securing the printing of these radio talks on "How to Keep well," in as many newspapers as possible throughout the state.

It is fairly easy to estimate the number of persons reached by public addresses from the platform, but no one can deduce satisfactory figures with reference to radio listeners or newspaper readers. The effect of this

educational program cannot, therefore, be stated with mathematic accuracy. We can only say that there is considerable evidence that it has been far-reaching and has done a great deal of good to the medical profession as well as to the public. Many messages have been received from radio fans, as far east as Scotland and as far west as San Diego, expressing thanks for information given, or requesting further information or advice on medical subjects. Lay organizations have not only gone on record with the customary vote of thanks but in many instances have, a year or so later, requested the lecturer to return. Both the Tuberculosis League and the Antidiphtheria Campaign Committee have found their labors facilitated in regions where this educational program has received most attention. Messages from different parts of the state indicate the stirring up of considerable public interest in the question of periodic health examinations. Finally, individual physicians have reported an increase in their work definitely traceable to the public health program.

In the third year of Dr. Reik's indefatigable labors in this field, a new factor was brought into coöperation —that of the woman's auxiliary to each county medical society. This organization has great potentialities for rendering assistance to the public health and preventive medicine programs but inexperience on the part of its members and indifference or reactionary opposition on the part of members of some of the county medical societies have prevented its development to anything like full capacity, because, speaking generally, it has become quite patent that the efficiency of the county auxiliaries develops in direct ratio to the attitude toward them of the county societies. Three counties may be classed as inactive. Five are holding regular meetings, attended in about the same ratio to their potential membership as are the county society meetings. Two are still young and apparently open-minded, while eight are doing definitely constructive work in one or more of several fields: (1) self-education through prescribed reading and instructive programs at their meetings; (2) public education, by promoting our health program; (3) hospital assistance, by making surgical dressings, by gifts of needed equipment to hospital wards and special appliances to patients; and (4) last, but not least, the placing of *Hygeia*, either by securing subscriptions or by donating same, in the belief that, when readers have become accustomed to receiving this magazine, they will insist on its being placed on the regular subscription list of clubs and reading rooms. One county auxiliary (Burlington) has so flourished under the chivalrous attitude of its medical society that it has divided into four regional groups, meeting monthly, while the county meetings are held quarterly.

Five auxiliaries have, at the request of their county societies, rendered appreciable aid in bringing pressure to bear on their representatives at Trenton in regard to three bills introduced in the effort to acquire for osteopaths, naturopaths, and chiropractors greater latitude in practice and the use of the title of doctor. That the letters written by the members of these auxiliaries, and their interviews with the legislators, were by no means negligible was evidenced by the statement of one senator to the effect that, while the cults introducing the bills had been most active in their support, not one local physician had approached him to urge opposition to their passage. "But the women!" he exclaimed: "They have deluged us with letters, leaving us in no doubt where the medical profession stands in the matter."

In the counties where the auxiliaries have been encouraged and are prospering, their coöperation with the county chairmen for the antidiphtheria campaign has extended all the way from securing opportunities for presenting the subject of immunization to the schools, parent-teacher associations, and other groups, to the actual conveying of preschool children to the clinics.

As Dr. Reik's assistant, my own personal connection with the educational work began three years ago this fall, coincident with the first year's existence of the auxiliaries, and I was very soon led to share Dr. Reik's opinion; namely, that this educational program, like charity, should begin at home. It was right at the threshold that we met our two chief stumbling blocks— the lack of knowledge of many of the doctors' wives in regard to the subjects we wished to put over, and the reactionary attitude of individual members of the profession, especially in regard to diphtheria immunization and periodic health examinations, which immediately nullified much of our effort in certain quarters.

By way of illustration, may I cite my oft-quoted example of the doctor's wife who asked me in open meeting one day if there had been many fatalities from the Schick test. And of the wife of another doctor who announced before a group which we were trying to convert to the antidiphtheria campaign that she did not believe in serum inoculations of any kind; that she thought the blood should be "a perfect protective agent." Then there was the physician who thus addressed a Board of Education that was on the point of voting the necessary funds for a toxin-antitoxin clinic in the school: "Your supervising principal says that it requires four to five months for toxin-antitoxin to take effect. But I tell you that long before that time has elapsed the toxin-antitoxin and all of its effects have entirely passed out of the system." Needless to say it will be many years before the effects of this speech have passed out of that community.

At another school-board meeting, just before the question of holding a clinic was put to vote, one member asked the physician present if any serious reaction was to be expected from the toxin-antitoxin injections. Instead of giving the very reassuring statistics available, not only from medical authorities and boards of health but from many school principals, this physician launched into the possible results in cases of sensitivity to horse serum and attendant anaphylaxis with such fidelity that the board was very soon persuaded that it had been providentially led to protect the community from a grave menace.

In regard to periodic health examinations, the story comes back to us repeatedly that the earnest applicant for such a check-up has been merely slapped on the back and told that he gives no evidence of anything being seriously wrong with him; that he should go about his business and forget it. Indicative, perhaps, of the general attitude of the majority of the profession was that of three physicians who were in my audience at a Rotary Club luncheon, where I spoke on this topic. Several times during the course of my remarks I turned to one or another of them for a confirmatory nod or the moral support of a mental handclasp, but each time I drew a stolid blank. It became evident at the close of the talk that this was not because they had been storing up enthusiastic encomiums; so to relieve the awkward absence of the usual felicitations I asked if they had been doing much in the way of periodic health examinations. "Some," said one, "some." "Oh, I suppose it's bound to come," he added, as though trying to resign himself to some impending calamity.

Such experiences naturally give rise to the pertinent question—why arouse the public to the logical benefits

of acquiring the habit of an annual physical examination when we cannot deliver the goods? Will the demand create the supply, or will the public eventually just lean comfortably back in its seat and remark good-naturedly: "Yes, that's a very pretty fairy story"? The command is to "Carry on!" So we hearten ourselves with the knowledge that even at the present time some physicians are specializing in this work and that the A. M. A. is urging medical schools to lay more stress on the teaching of preventive medicine. It is not unreasonable to hope that an educated public will eventually awaken to the tremendous importance of the post of school physician and will see to it that the salary is made commensurate with the responsibilities of such an appointment.

To create a health-minded, health-conscious public is, then, our endeavor, and for two years we optimistically relied on the county societies and auxiliaries to see eye-to-eye with us in this matter. Through the intermediary offices of these two organizations we were enabled to reach during the year 1927-28, a total number of 47 audiences, comprising in all 6700 persons. Our record for the year 1928-29 was 76 talks to an aggregate audience of 6250. Inasmuch as the total number for the first year was enormously swelled by two school groups of 1000 pupils each, and as we had no such items the second year, an estimate of the growth of our work must be based on the appreciable increase (60 per cent) in the number of talks given. This was consoling but not satisfactory. Part of that increase had come through the coöperation of the medical society with the state committee for prevention of diphtheria. I had acted as secretary for the executive council of that committee, the minutes being mimeographed at Dr. Reik's office and mailed from there. My services as a speaker had also been placed at the disposal of the committee; so I regarded the increased activity of the second year as a temporary inflation rather than as a substantial gain. Naturally I gave the matter much thought.

Only three per cent of our invitations to speak had come through members of the county societies. The balance of our accomplishment stood to the credit of seven of the auxiliaries. I had traversed the state in all directions, doubling back on my tracks repeatedly at the beck and call of any group that would give us a hearing. Such lack of system was a waste of time, effort, and money. It also placed our whole program at the mercy of the fluctuating enthusiasms of the county groups. I recalled that the talks I had given in the schools had been well received, and my experience in a two-years' tour of the mission fields in the Orient told me that the hope of a new doctrine lies in the rising generation; that its foundations will be laid in the homes established on the precepts of the classroom.

I, therefore, went to Dr. Ireland, the Director of Physical and Health Education in the Department of Public Instruction in the state of New Jersey, and asked him if he did not believe that such instruction as the medical society was offering would have a definite place in the health education of the school child. He took the matter under advisement and within a short time submitted a schedule assigning me to each of twenty-one counties in the state for definite consecutive periods of time falling within the limits of November 4, 1929, to May 16, 1930, week-ends and holidays being omitted. He further notified each of the county superintendents of the time allotted to his county and I followed this letter with one of my own, explaining our objectives and asking each of the superintendents for a definite reply whether it would be his pleasure to accept our offer. To our pleased surprise, seventeen of the twenty-one superintendents gave us cordial support. One additional county will come in next year; two have not been heard from; and one declined on the ground of inadequate help for organizing a program in such a large territory as his county covered.

From September 18th to November 4th of this year we were able to accept invitations to address thirteen organizations, chiefly parent-teacher associations, embracing a total of 718 persons. Since November 4th, the county school program has been in effect and we have just completed the fifth county assignment. The number of talks given in schools was 69; number of pupils reached, 13,288; number of talks given to older groups, 20; number of persons reached, 850; total number of talks since September 18th, 89; total audience, 14,138.

The talks have been well received, in some cases enthusiastically welcomed, by principals, teachers, and pupils, and we have had many invitations to return. The county superintendents have, without exception, answered my question, whether a similar annual message would be acceptable, in the affirmative. Some have gone so far as to say that it is an actual need. My audiences have been gathered in spacious assembly halls, or in classrooms where they had to sit two in a seat, with many standing around the walls and down the aisles. Once I stood on a chair in the entrance hall of a school while 250 pupils also stood in a many-ringed semicircle about my improvised platform.

While the theme most stressed has been that of preventing focal infection with its attendant degenerative processes, by means of frequent consultation with doctor and dentist, the subject of diphtheria immunization has been presented whenever the occasion has seemed opportune. A year ago we added to our repertory an illustrated talk on "The Life and Work of Pasteur." For this lecture Dr. Reik had secured, during the previous summer in Paris, about forty pictures, from which slides were made. A small lantern was provided by the society and to date the talk has been given sixteen times. On several occasions the nurses from near-by hospitals have been invited to hear it, and among the requests for its future delivery is one for the chemistry classes in a high school.

The form in which all of these subjects are presented must of necessity be extremely elastic; for children of the fifth to eighth grades a simple narrative, broken by occasional direct questions bearing on the personal application of points covered. Then a jump to the frankly biologic aspects which would claim the interest of high-school pupils. The Kiwanis and Rotary Club members want to know just how the annual physical examination has worked where it has been tried out, and what economic and physical gains may be expected from it. The parent-teacher associations are interested from two standpoints; possible benefits to the individual adult member, and possible advantages to the children and pupils of these members. The Business and Professional Women's League has an open ear for any proposition that holds out hope of greater working efficiency and deferred old-age retirement.

We might continue thus through a long list of organizations to show how vitally each one of them is interested in and affected by the matter of personal health, and how more than willing they are at least to give a hearing to any one who professes to be able to throw a ray of light on the subject. The field of educational work along this line is practically boundless,

but such an enterprise requires, in common with all similar undertakings, systematic circularizing and persistent follow-up.

If I am any sort of prophet, I should say that the Medical Society of New Jersey will, at the close of this year, be confronted with the necessity of taking on an additional field worker or of limiting the educational work to either school or adult groups. Under present conditions Dr. Reik is still carrying the radio program and the legislative supervision while the field secretary continues to decline requests for talks that would conflict with the county programs. In two instances where schedules of prospective visits have already been made out for us, in addition to our talks in the schools, almost every evening is filled, and several afternoons after school hours, with engagements to speak before adult organizations. I submit to this body here assembled and preëminently fitted to render an expert opinion, that no one can give four to six talks a day, to audiences ranging from 20 to 800, and still retain sufficient effervescence for a sparkling evening address.

In a most comprehensive and valuable book, called "The Struggle for Health," Richard H. Hoffman has this to say: "Our boys and girls are taught to salute the flag; they are taught to be proud of their national military heroes, their statesmen, their inventors. But those illustrious pioneers who have contributed more to the health and strength of the nation than army or navy, court or school; who wielded their tiny swords in defiance of man's most pernicious enemy, the microbe, have remained unsung."

To supply this tribute is the unquestioned privilege and obligation of the medical profession; to remedy this defect should be, to my mind, the main objective of medical educational work, for in its accomplishment all other desired ends are attained.

DR. GEORGE N. J. SOMMER: Unfortunately, Dr. McBride has been called away and I am asked to preside in his place. I shall call upon the president of New York Society to open the discussion.

Discussion

DR. VANDER VEER: This paper of Mrs. Taneyhill's is of exceeding interest to me because at the very first meeting of the council of our state society I presented what might be termed an inaugural address in which I gave the experiences of some state societies in having a field representative. Some of them, as we know, have doctors and some have lay representatives, men or women. I think we are losing sight of one of the strongest forces in our own state for the upbuilding of medical defense and protection and aid in various of our endeavors when we neglect the women. As Mrs. Taneyhill has shown in her paper, there are efforts in which, very legitimately, the women may bring about changes in legislative thought for our own benefit. Then again in health matters the women can do far more than we men can do as physicians, because if we raise our voices we are accused of hoping to benefit thereby, and we will, of course, be the ones to benefit.

Perhaps it may interest Mrs. Taneyhill if I relate a few little experiences that I have been preaching in New York State, which she might turn over to her doctors, for the program seems to be rather universal in these three states. I have been asked for three successive years to go into a small country town of perhaps 3000 persons, where they have a woman's college. I went there in October of this year and the doctor who gave me the invitation said the women wanted me to come and talk to them again, wanted me to lay out a program for their work this winter. I prepared a careful health program for them to follow. The total cost of my visit was about $3 and the next day the doctor who had invited me had five or six women to be examined physically, mention having been made in my talk of what the health departments and the medical societies were advising as a personal health program.

Dr. Wynne, health officer of New York City, gave me a clue to the subject of economics in which he said that we doctors had been going along the same old lines and had not created any new business; so I finally evolved this as a slogan in New York State: We cannot get away from the lay organizations; therefore, we will lie down with them and ask them to provide means for carrying on the health programs and we are going to benefit ultimately from the periodic health examination by an increased income. As a concrete example, take a town of 3000, if only 200 come to us for examination at $3 each that would be $600 that would accrue to be divided among the doctors; if 100 came for examination at $25 each there would be $2500 to be divided. That led me to see what my own experience had been. I am a urologic surgeon and yet I have a number of people who came to me originally for a physical examination and who have come once or twice, year after year.

I should like to have this question discussed: I have a dentist who, every three months, sends me a little red card which says my date for examination is due. It costs me money to visit him but it is prevention. Is it ill-becoming a county society to make this investment, to take a sum of money from its treasury and send to the individuals in that county a card stating a few of the pertinent facts regarding health examinations? Let us take a county of 50,000 population in which for six cents apiece, or a total of $3,000, every person would be reached. If they got 5000 back for examination during the year at $5 each, $25,000 would go into the pockets of the physicians who made those examinations. That is the thing that strikes home to our doctors in New York State. I go into a county society and they say we do not want to hear you talk unless you can tell us how to make a dollar. Is it unethical, I would like to ask, for a county society as a group to do this? I understand there are certain county societies who advertise as a group and I have been preaching in New York State that they should advertise by mail to patients to go and see their doctors. The lay organizations are sending such literature to patients. If we could do this from a small beginning, such as you have had, with only forty-two meetings the first year, increasing to seventy-nine and now within two months to eighty-five, certainly within a limited time, say one or two years, our program for health would go over and be kept right in our own hands.

Another factor: We have been asking them in New York State, in the counties, to do one more thing and that is to impress upon the public the money physicians are losing by charity work. I have asked them to keep one more column in their income-tax books, putting down day by day the calls they make or the work they do for which they do not charge. Before the end of the year I hope to get reports from some counties which will tell me how much in actual cash these individual men have lost in doing work for nothing, so that when the banker has contributed to that new hospital and it appears in the newspapers of that county, the county society may say we gave so much in labor

to charity, in this community. You never see how much the doctor does by way of charity, and I think in that way we may reach some of the questions that bother us.

I am very glad to have heard Mrs. Taneyhill's paper and I trust that when it is published I may be able to make some excerpts from it and use them in my effort to get a field secretary appointed in New York State as efficient as Mrs. Taneyhill, in order that we may organize that force which we have neglected perhaps to too great a degree in our own state.

Dr. Sharpless: I have been very much interested in Mrs. Taneyhill's paper and I wish that we could introduce something of that sort into Pennsylvania. Dr. Donaldson tells me that the finances of the state society are now sufficient to warrant us doing so, and I am sure it will work to a very great advantage to the public as well as to the profession.

I do not wish to be presumptuous in criticizing anything that Dr. Vander Veer has said, but he has emphasized the value to the doctors of making these periodic health examinations. I think that is scarcely the ground upon which we should put it in our public talks. We should make the public understand that it is to the advantage of the people to have these periodic health examinations made.

The thing that most impressed me in Mrs. Taneyhill's report is that the chief difficulty comes from our own profession. It is a sad confession to have to make and we in the medical profession can control to a greater extent than any one else that idea on the part of the doctors. We have a big field for missionary work in talking to our own members and getting them to inform themselves about the important matters that are going on, not for their benefit so much as for the benefit of the public. If the public loses its interest, seeing the disinterestedness of the doctors, their confidence will be gone.

Dr. Donaldson: I stated early in the morning that I expected to gather something from Mrs. Taneyhill's paper and I have not been disappointed but have simply strengthened the impression that I have held heretofore on this very important subject. I have watched with a great deal of interest the progress of a similar program in the Illinois State Society and I know they would not have made the progress that they have without the very valuable assistance of a woman worker whom their Public Relations Committee has employed. We have not felt before in Pennsylvania that we were ready and able to spend the money on a similar program. We have the machinery all ready and I feel quite sure that very soon we will take this forward step. I feel that inasmuch as our members are so indifferent to these various problems of sickness prevention that it behooves those in influential positions in state medical societies to see that the best sentiments of our best members are at least vicariously expressed through some woman representative who may be equally as clever as Mrs. Taneyhill. I think at heart all of our men are in sympathy with the sickness-prevention program, but they give it little thought because they have so many trying problems to meet day by day; and their problems, as you know, are never ended, beginning early in the morning and lasting until late at night. When they are away from the influence of hearing a talk or reading an article on the subject they do naturally become very indifferent to it. I think it will be to our advantage, if we are fortunate in employing a representative who will submerge her own individuality and identity, at least to the extent of remembering that she represents the best element of the medical profession in the state. I believe that we can thus, vicariously at least, represent our indifferent membership before the public and, after all, we do want to convey the idea to the public that the county medical society is interested in sickness-prevention problems and hopes some day to regain the leadership in the work that has been lost through indifference.

Dr. Sadlier: I think the State of New York has got something to carry back home. New Jersey is not going to get it all from this meeting. I think this paper of Mrs. Taneyhill's has demonstrated what can be done along the lines she has suggested. I congratulate her upon the splendid work she is doing here in the state of New Jersey and congratulate the Medical Society of New Jersey on having such a person to do this field work. All the time that she was reading that paper and telling of the wonderful things that she is doing, I was thinking of some way by which I might influence the board of trustees of the Medical Society of the State of New York to supply me with adequate funds so that my Public Relations Committee could have some similar representative working in the counties of New York State and trying to bring harmony out of what is now rather a chaotic condition. It seems to me that this is a great piece of work that is being done in New Jersey and we should carry it on in our other states. I know something of what is being done in Illinois along similar lines and I know that they are accomplishing a lot of good substantial work in educating the public. The trouble in New York is that about three years ago they got a little gun-shy on the female side of the question. In 1927, about 150 men in the House of Delegates registered themselves in the affirmative on the question of having a woman's auxiliary. They passed it on to the incoming president who organized such an auxiliary. I was that unfortunate person. Men usually stick by what they agree to but I found that I was up against a real problem and this time I did not succeed. At the same time, I should be delighted to see something of the same kind carried on in New York that is being done here. I sincerely feel that we should have a woman's auxiliary and have voiced my sentiments a great many times. We should have such a representative as Mrs. Taneyhill to go out and address these women's clubs, schools, and lay groups.

Dr. Ross: I have been so much pleased with Mrs. Taneyhill's description of this work that I have been casting about and wondering what I could say by way of endorsement. It is a revelation to me. I was exceedingly interested in the comments about the indifference of doctors. Nothing truer has been said today. I think we have in our county a very active medical society. It has done a great many things and when you come to an analysis, it is because there have been a few leaders. The rest of the men will go along with everything that is good, but if you took such leaders out of the county I doubt very much whether many things would be initiated. One thing that grows out of this discussion is the question of keen men in a community. Doctors are not really indifferent but they are so busy with their major occupation, which one will admit must always be the essential of curative medicine, that other things are incidental. Unless some one stands out and leavens the mass of doctors they will not take a stand for these things, and yet all they need is a leader.

Dr. Sadlier should interview the Budget Committee first. I am not a trustee any longer but I will promise him right here that I will use my influence to try to

get that through. A field secretary would work better in New York under the Public Relations Committee than under any other organization. The executive committee is too busy, the state is too large; there are problems coming up from all over the state and you can tell by the size of the problem you have in New Jersey how much bigger it is in New York. It is not any greater, but there is so much more of it. If we had a field secretary working under the Public Relations Committee it would be ideal, and I think the sooner we can get that the sooner our influence will begin to grow.

DR. LAWRENCE: I want to extend to Mrs. Taneyhill my congratulations upon this splendid piece of work that she is doing, and I should like her to know that I have had some personal experience not only in doing but in directing such work. For two or three years, more than half of my time was given to addressing public audiences. I have addressed groups of 15 to 3000 and have had the satisfaction that she has expressed of seeing reflected in the lay audiences a hearty appreciation of what was being said and of the great future that seemed to be outlined in the way of prolonging life, and at the same time the blank expressions from the doctors. This reflection from the physician is a serious matter. New York State for ten years has had a field corps of lecturers on public health, not from the state society but from the State Department of Health. I, personally, at one time had twelve lecturers in the field, paid from $1500 to $3000. They devoted their time to this work and some of those people had booked lectures averaging more than two a week for the entire year. In addition to that, New York State has had a great deal of the educational material that is sent out by the life insurance companies and the Tuberculosis Association. The Department of Health has conducted extensive educational campaigns. My share was in educating the public against venereal diseases but there was at the same time a corps of lecturers educating the public on the work of the public-health nurse, the child-welfare program, and a corps of half a dozen lecturers giving demonstrations and discussing with small groups of people the necessity of care and prevention of general diseases.

We reached a point that became acute in New York State and which Mrs. Taneyhill has mentioned as encountering. The public was educated far beyond the physician and the physician resented it, and I think rightly so. The public would come and tell the doctor what they wanted done and if he was not prepared to do it they told him what the modern treatment was, that he was way behind. We must bring the medical men along at least as far as we do the public. We can go too far with the public. The medical man is not up on preventive medicine, as we, who are in this work, are always seeing. We are not fair representatives of the average physician today and it is only because of our contacts that we have grown beyond him. We need only to look at each group that has come into our midst for the first time and see how it develops; and we need only to go into the county societies to learn that many of the men do not realize what we are talking about. Perhaps they will criticize what we are saying. But stop and think, we are moving at a rapid pace in the prevention of disease, and the busy practitioner who does not have the time that the women do at their afternoon teas to discuss the modern things that are handed out should be sympathized with. What we need more than anything else is postgraduate education but, there again, it is the expert who lectures to the ordinary man and he lectures over their heads in many instances. We should be tolerant with those men who are practicing medicine and taking care of our public at the same time.

From my own personal experience there is nothing more pleasing, more stimulating, than to talk to children. I had several women working with me who were wild about talking to the school children on health matters. It has its value but one talk cannot do very much. That these things may be permanent in the lives of children they must be repeated often, and associated with their general work. We went to the Department of Education and asked for help because we knew that the teachers needed the talk as much as the children, and we have finally gotten the Department of Education to introduce into their training school courses in public health, and the teachers will soon be given courses in elementary public health so that they will be able to teach the elements of health to children.

I think what we need to consider is how to develop a program that will help the practitioner, in a way that will still preserve his self-respect and also give him the elements that he has lacked in his education. Second, we need to go immediately to our medical college faculties and get them to revise the curriculum so that the man who goes out will not be a pathologist principally. Today medical practice is all based on pathology and unless a man finds some pathology he does not feel justified in making an examination. We should be looking for the well man and should study physiology. We should be content to tell the man that he is physiologically well, whereas the patient we are proud of is the one whom we feel we have just pulled out of the grave.

I believe Mrs. Taneyhill will have even more of these sad experiences and the work will become eventually rather discouraging because of this chasm that exists. It is better to devise a program that will help the practitioner to see something beyond the sick that he is called upon to care for.

DR. MORRISON: It is gratifying indeed to observe the reception that this program by the Medical Society of New Jersey and Mrs. Taneyhill's excellent work have received, but I want to remind the group here that:

> "The heights by great men reached and kept
> Were not attained by sudden flight
> But they while their companions slept,
> Were toiling upward in the night."

You need in every one of your state societies a half dozen men who are imbued with vision, who will not be easily disappointed, and who will know that after the expenditure of years of effort accomplishments are going to be attained.

When this program was first started in the state of New Jersey, I am free to say that the state medical society had no idea of branching out into the line of work that we have developed in the last six years. Dr. Reik was chosen as the executive secretary with the chief end in view that he should spend his time in Trenton playing politics, but we soon saw the need of educating the public and some of us saw in the securing of a medical field secretary a means of approaching the public on broad educational lines. I happened to be chairman of the committee that chose Dr. Reik and we were instructed by the board of trustees to outline his duties. There was at first considerable opposition to our program. The House of Delegates could not get away from the fact that our proper work was a continuation of the fight against the cults. Some had not vision enough to see that the

way to overcome the cults was to see that there would be no place for the cults. We have put this program through and the work became so great that no one man in Dr. Reik's position could have carried it on. That was after three years of work. Then we were able to go to the House of Delegates and show them the results of our labor. We said: "We are showing you what the public demands and how easy it is to increase the income of the physician along these new lines; are you going to drop it or will you help us carry it along?" They unanimously gave him Mrs. Taneyhill as an assistant. After a year of her work it again became necessary to secure more funds. We again went to the House of Delegates, showed them the work accomplished, and told them that it was necessary to have more money, partly to reimburse the state society officers for the actual cash outlay given to this work and partly to provide funds for the carrying out of the program. The House of Delegates raised the dues from $10 to $15 and are satisfied with the results.

Mrs. Taneyhill may be discouraged regarding the action of individual doctors. Well, we all get that way, but it is the whole group of physicians that we are attempting to accomplish things for and we must look at it from the point of view of organized medicine. If we keep this in view, in a very few years we will accomplish our ends.

We have been greatly encouraged and assisted in our work by the Tuberculosis League in New Jersey and by the State Diphtheria Campaign. One thing the latter has shown us is that the State Boards of Education and Health in New Jersey have sent representatives to our body to state definitely (desiring us to carry the message to the profession) that they no longer want to do any clinical work whatsoever in the care of school children and are glad of the opportunity to unload that work on the medical profession. I am taking that message this year to every county society. I am showing them the necessity for that work, especially the postgraduate, tuberculosis, and diphtheria work, and am trying to have them organize in every county a group of men who will administer toxin-antitoxin and give the Schick tests or turn the child over to this group who will do it. We try to show them that if they do not wish to do that now and reap a revenue, they will have no kick coming if the State Board is authorized to do it.

I want to mention one little incident of Dr. Reik's work in regard to handling legislation. We abhor lobbyists and Dr. McBride told the House of Delegates that he would resign rather than have a body of lobbyists in Trenton, that there were higher methods and we should find them. Dr. Reik makes a keen analysis of every bill with reference to how that legislation will affect the public welfare. Last year there was an osteopathic bill up and the leading newspaper, the *Newark Evening News*, published two editorials supporting the osteopaths. We went to the editor and personally protested against any such point of view. He was told that we were representing not the medical profession but the people in Essex County; and he changed tactics. That is the kind of work that this policy accomplishes.

I am not as much concerned about our physicians and their opposition to preventive medicine as Dr. Lawrence is. There is no question that preventive medicine is the next greatest move in medicine since the introduction of antiseptic surgery, and if we have to go to our doctors and show them primarily how they can make money, let us show them the financial returns from preventive-medicine work and it will go over. The average doctor is a great deal more intelligent than the average patient and when the patient wants a physical examination it is up to the physician to make it, and if his intelligence is broad enough he will realize that if he doesn't do it some one else will. The work is here, it is progressing, and we must make the doctor think of these people and prepare himself to make thorough physical examinations.

Mrs. Taneyhill is somewhat discouraged in her work, but I think she is looking at it through blue glasses. As I have directed this work in New Jersey for several years there were many times when I might have done the same thing had I not looked at it in the sunshine. I refused to be discouraged, and when you get the great big broad view from the open spaces you see things and get inspirations that you do not get in a little local field. Mrs. Taneyhill knows from the reception that she received in the House of Delegates last year that her work is keenly and highly appreciated. We know what she is doing and where we are heading and we see with a broad vision the accomplishments and the results. You know that even Christ was disappointed with what He did and He was a great teacher.

Dr. Philip I. Marvel: I have been particularly impressed with the work that Mrs. Taneyhill has been doing, but I must confess my previous ignorance as to the quantity and the value of that work.

While listening to the various discussions I have felt that this Tristate Conference is a nucleus from which there is an influence working very much as an electric current. There is a force generated here, the extent of which you or any one else cannot determine. You are setting in motion activities that are reaching out not only in the present but into the distant future, and the far-reaching influences of these energies are greater than you are, or any one else is, able to determine. I feel quite sure that the questions you are discussing in these meetings and the interests embedded in them are going to develop into richer harvests than you have any idea. I believe, as Dr. Morrison remarked, that you are solving the question of cults perhaps without thinking about them. It is the education of the public, the far-reaching influence of the women, that is going to bring about changes and realizations of which you have not yet dreamed. If the women will take up these problems with the spirit that they enter into many other things, the influence of their work is going to be exceedingly far-reaching. As you respect your mother, and as everybody else respects his mother, so the general public, the he-man, has more respect for the work of women than he has for the work of men, and there is no question but that you have, whether intentionally or not, in organizing your auxiliary forces, touched upon an instrumentality that will reach much farther in its accomplishments than you are inclined to think at the present time.

I want to say, personally, with reference to the paper Mrs. Taneyhill presented, that to me it was a revelation of the work that she has been doing and it is also a fruit that is giving quick returns to the originators of this Tristate Conference.

Mrs. George N. J. Sommer (Trenton, N. J.): This is entirely too large a subject for me to cover but I thank you very much for asking me to speak. I have enjoyed hearing these various opinions and I hope, as the wife of a physician, I shall be helped by them and perhaps in my own sphere I may be able to reach a few people. I think that one big question is: how

often does the doctor follow his own instruction in having a periodic health examination?

DR. REIK: I want to take advantage of the opportunity to say something about Mrs. Taneyhill's paper, especially about the work that she has been doing. I would also make it particularly clear in the beginning that while it was mentioned several times that Mrs. Taneyhill started as my assistant and had been working in association with me at the office, this program put on by her this winter is entirely of her own devising, and it has been more effective than anything we have ever attempted in the public educational line. You have expressed surprise at the extent of the work. Although I was very much in touch with it, I was surprised a week ago to hear of the number of meetings she has addressed and the number of school-teachers and children she has reached during the past two months. That work is of a superior character. It is the best of the educational work that we carry on. I had an opportunity the other day to hear from the outside something of its effect. I was attending a conference of representatives of state organizations launching a campaign regarding mental hygiene. The president of the Parent-Teacher Association of the state did not know me nor my connection with the state society and quite voluntarily told in my presence of Mrs. Taneyhill's work before the teachers and parents, saying that it was the most effective bit of work that had been introduced to the public through that channel, and asking that organization to get some one like Mrs. Taneyhill to help in launching the mental-hygiene program.

Dr. Sadlier and Dr. Ross both spoke of the field secretary being under the direction of the Public Relations Committee; that is the way the work is done here. We continue to call our committee the State Welfare Committee, which is only another name for your Public Relations Committee. Mrs. Taneyhill's and my work, outside of the editorship, are conducted under the direction and guidance of, and always by reporting to, the Welfare Committee of the state society, and I think that is the proper place for it.

Dr. Lawrence has spoken of the necessity of carrying the education of the physician along with the education of the public, and that is extremely important. The public has in some directions gotten considerably ahead of the physician. That is why we introduced a new department in our Journal. Remember the public is not getting all this instruction in medical matters from us. It is getting a good deal from the most important magazines of the country. There is scarcely an issue of *Harper's* for the past year, and some other magazines, that has not carried a medical article. Occasionally the *Saturday Evening Post* carries one, and that has been far-reaching. I conceived the idea that it must often be embarrassing for the physician to find that the patient knows something more about the modern scientific aspect of medicine than he does; so we are trying to improve that condition somewhat by carrying reviews or abstracts of books that were designed for the public and are read by the public very extensively—such as *Why We Behave Like Human Beings* and *Why We Misbehave*. Hoffman's *Pursuit of Health* is a masterpiece and is being read by the public just as Lambert's new book, *Prominent Medical Men*, which has just appeared, will be read. It will have a much wider reading by the public than by the profession. We are trying to give these to the profession by reviews of the books in the Journal and to the public by broadcasting.

We have revised our scheme for radio health talks this year. On Friday evenings at 8.30 we are making use of Hoffman's, Haggard's, and Lambert's books. A week ago we spoke on Æsculapius, this week on Pythagoras, and next week we will speak on Hippocrates. We are making use of the device that the General Electric and various other organizations are using. I heard one give a brief account the other night of Byrd's flight over the south pole, introductory to an advertisement; so we are trying to give a story that will hold the attention of the listener by telling something of the life work of these physicians of the ancient period and then ending with a paragraph or two on the question of how to keep well. I hope they are reaching physicians as well as the laity.

We have been fortunate in securing the coöperation of the State Boards of Health and Education. Mrs. Taneyhill brought about the relationship with Dr. Ireland, the new medical director of the Board of Education, and he is more than pleased with the way this work has gone on and will make plans for increasing it next year if we can supply him with what he wants. He is quite conscious of the fact that the teachers as well as the pupils need this instruction. I think the most effective part of it for the future will rest with the children. We cannot do much with the generation of my age, nothing with the generation back of that, but what we can get over to the children will be useful.

Does this pay? Yes, the profession can very well afford to do it. Regarding the number of immunizations in the state, for instance, I did not work out mathematically what the income had been to the various physicians, yet it is a fair assumption that the doctors of this state reaped at least a half a million dollars last year in the increased work from immunization alone. I think it is bread cast upon the waters that is coming back a thousandfold. One of the county secretaries told us recently that if the members of the profession of the state would count up what they were taking in each year, additional to former receipts, from one thing alone, viz., the profits resulting from the Workmen's Compensation Law of this state, they would find that they could afford to pay much higher dues to the state society. It should not be looked at from the point of view that preventive medicine is taking business away from the doctor; it is bringing him business, and it is a very profitable investment for him.

MRS. TANEYHILL (in closing): I am very anxious to dispel the impression that I am discouraged, which I have apparently given out. I do not feel discouraged in this work. When I go to a community, I am up against a concrete problem, which I wonder if the medical profession appreciates. I am asked, to whom can I go to get an examination? I do not know what to say. As Dr. Lawrence says, when you educate a community ahead of its medical officers, what are you to do? I, of course, know that the American Medical Association is requesting the medical schools to stress this subject of preventive medicine in their classrooms. I know that Dr. Martin's plan for having hospital facilities available to local physicians is receiving some attention, but that is rather abstract when one is asked by this or that woman where to go to get an examination, and if they are not satisfied, then all that I have said is lost. I do not think that you can ever educate your older men who are interested in the curative side to take up preventive work, but I think if you get the school children interested along with your medical students, that you might in another ten or fifteen years have a gradual readjustment that would work itself out.

A school-teacher told me that she did a good piece of work in the mountain region of West Virginia merely in the matter of cleanliness. They had no standards at all along that line. She said she did not have to wait until the second generation, but five years later, when the younger brothers and sisters were coming along, what she had said had percolated into the homes. So we may not have to wait until the next generation.

A layman said to me when these radio talks were launched and when my work began: "That is the cleverest piece of propoganda that has ever been put over." I do not know where propaganda ends and education begins. I do not know whether I am going to be regarded as carrying on your propaganda. New Jersey has the reputation of being a nice compact little state and it is easily covered. When I hear of you doing the same thing in Pennsylvania and New York, I feel rather appalled because I do not know how you would ever get any one worker to cover such territory.

I have wondered whether the county medical societies might consider it advisable to propose a group to give these periodic health examinations in each locality. That would be a tremendous help to the people and it would also keep them from going to the Life Extension Institute for their examinations; it would also give me an answer.

In answer to Dr. Lawrence's point that I might get carried away in talking to the children, of course an audience of children is very responsive. They are all right on the ground, the turn-out is fine, they come there to learn and are very receptive, but I have found the teachers extremely appreciative and responsive also, and I have tried to make it plain that my talk is only by way of underscoring what I know they are teaching in the schoolroom. They have thanked me, saying that I have given them support and encouragement and that they will continue to bring up in the classroom the points that I have made. Some of them have said that the idea was all new to them, especially focal infection. I think this should be a direct message from the state society and then the teachers could have that to work on through the rest of the year.

Another point is that a field worker, such as you have discussed here today, would in almost every instance, it seems to me, be a link between the medical men, who are so busy and so preoccupied, and the lay health organizations with which you wish to coöperate to a certain degree. That was shown to me quite unexpectedly in several instances. Whether it should be a woman or not, and as to the attitude of medical societies, especially toward laywomen, you remember probably the story of the little boy who heard a sermon in church upon a text from Job: "Man that is born of woman is of few days and full of trouble." When he tried to tell his mother about it he said that the minister preached on "man is born, and in a few days he will have trouble with a woman." I am afraid that is the idea of the men who resent a woman taking this position and that is the attitude that they foster. I think this is not a matter of sex, but of temperament and brain, and should be so regarded. It seems to me that where a woman is mixed up in any difficulty with an organization the men will give Adam's old alibi. I think there are just as many discussions that happen between men where no women are concerned. I think you will never find a man who will put up with the small discomforts and trials and do the little "dirty work" that this job entails.

Business Session

Dr. Reik spoke of the next meeting place and Dr. Vander Veer said that, according to the usual custom, New York would be glad to have the meeting in that state, probably the last week of January.

Dr. Reik said that the question of the program would be left to the officers of the New York State Society.

Dr. Morrison thought it would be agreeable for the next program to follow the advice suggested by Dr. Ross. He thought these programs should be well thought out in advance and given a little more time, for if the members of this group know what the program will be they will be better able to discuss it. Dr. Morrison thought it would be a good idea when the Pennsylvania State Society entertains this group again to have Dr. Patterson present a paper on the Ideal Medical Practice Act, a subject that must receive consideration soon, as the acts are being revised all over the country and should be approached from the proper point of view. Dr. Patterson's remarks today were very fundamental and a conference could well be devoted to that subject.

Dr. Reik suggested that it might be considered feasible to have the principal paper at least distributed to members in advance of the meeting. "But," he said, "as a secretary of many years' experience, I doubt whether this is feasible, even though it is desirable. It would help possibly to keep the discussion from wandering away from the main topic. If the members knew what was being presented for discussion, perhaps they would stick more closely to the point. I would call attention also to the fact that this is the beginning of the fifth year of our work and your secretary has served for four years, having assumed the office once and been elected the other years."

Dr. Morrison: He was elected permanently.

Dr. Reik: You may offer a motion for reconsideration.

Dr. Sommer: I take it that the program committee of New York State will be able to prepare the program for the next meeting.

Dr. Hammond: I move that a vote of thanks be extended to the New Jersey group for the hospitality shown us at this meeting.

This motion was unanimously carried.

Dr. Hammond: I move that the question of secretaryship be laid on the table until next meeting.

Henry O. Reik, M.D., *Secretary.*

Selection of Officers for a Medical Society

The election of officers for a medical society is more important to the welfare of the organization than it is generally given credit. It appears that the traditional attitude towards an office, especially the president, calls for the election of a man of advanced years who has passed his years of greatest activity and because of past service is entitled to the compliment of an election as president. This is the wrong basis upon which to elect officers of any working organization. If our medical societies wish to prosper they will elect active, enthusiastic men as officers. It is a working job and not an honorary one, and when a man is elected to such a position he should regard it as a commission to work for which the society has chosen him, and not as an honorary compliment.

TUBERCULOSIS ABSTRACTS

A Review for Physicians

PREPARED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Published through the coöperation of the Pennsylvania Tuberculosis Society and the Medical Society of the State of Pennsylvania

THE first clear differentiation between the bovine and human types of tubercle bacillus was made in 1898 by Theobald Smith. When it became evident that the bovine tubercle bacillus may be conveyed to the human through the drinking of milk, the sanitary control of this important food was demanded. Pasteurization and the gradual but steady elimination of tuberculous cows have undoubtedly been factors in reducing tuberculosis, particularly the osseous and lymph glandular forms commonly seen in children. In England, the problem seems to be more difficult and unyielding than it is in the United States, according to William G. Savage, health officer of Somerset, from whose book, *The Prevention of Human Tuberculosis of Bovine Origin,* most of the following information is abstracted.

Human Tuberculosis of Bovine Origin

There is little statistical evidence to prove the direct relationship between the extent of bovine tuberculosis among cattle and the incidence of human tuberculosis of bovine origin. Satisfying studies of this kind are obviously difficult to make, and those that have been made are inconclusive.

Prevalence of Disease

The exact prevalence of bovine tuberculosis among humans is not easy to determine. It is impossible to decide by clinical means whether a given case is of human or bovine origin, although the organism may, by a somewhat laborious bacteriologic procedure, be isolated and identified. Several bacteriologists have undertaken studies of this kind, and their total number, while not large, is enough on which to form an estimate of the percentage of bovine tuberculosis. On the basis of these studies, Savage arrives at the conclusion that 1 per cent of the respiratory and 23 per cent of nonrespiratory cases in England are of bovine origin. From this, he calculates that in 1927 a total of 310 cases of respiratory and 1635 cases of nonrespiratory tuberculosis which ended in death were of bovine origin. Moreover, the cases not ending in death, while not ascertainable, must be considerable, and responsible for a vast quantity of suffering.

Extent in United States

In the United States, Park and Krumwiede in 1910 studied the bacteriologic origin of 435 cases of tuberculosis. About 7 per cent of the entire group (all ages) were of the bovine type. Of the group under five years of age, however, about one third were of bovine origin, and slightly over half of these were involvements of the cervical glands. Subsequent to that study, New York City adopted the practice of pasteurizing all milk supplies, with the exception of about 1.5 per cent which was certified. This did not apparently affect the incidence of pulmonary tuberculosis among children, but the percentage of cervical cases of bovine origin was reduced to less than half its previous figure.

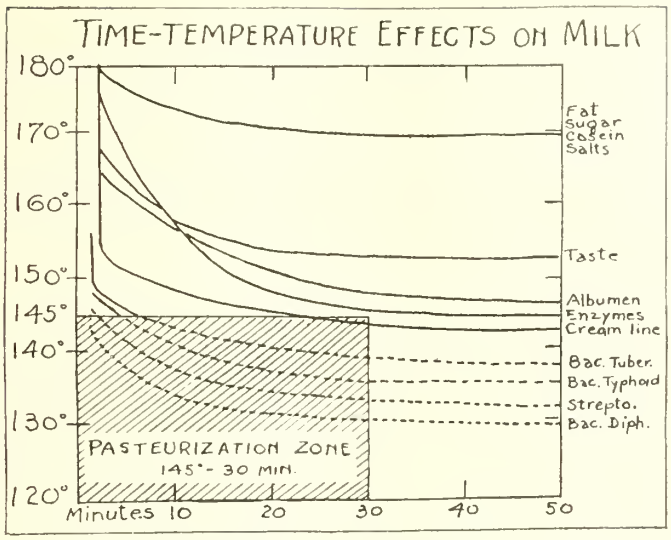
Method of Transfer

Human tuberculosis of bovine origin may nearly all be charged to the use of milk containing living tubercle bacilli, though cream, butter, and cheese cannot be altogether ignored. The milk is infected usually from the lesions on the udder, though contamination of milk from feces containing excreted tubercle bacilli is also common. Every cow that reacts positively to the tuberculin test should therefore, be regarded as a potential source of infection, for both human beings and cows.

Control of Bovine Tuberculosis

Methods for dealing with the problem in the United States are primarily twofold; the eradication of the disease among cattle by slaughter-

ing positive tuberculin reactors and the pasteurization of milk. The Federal Department of Agriculture, through the various state bureaus and departments of animal industry, has pursued with vigor its policy of "cleaning" herds and accrediting those free from the disease. While there are many practical difficulties in the way and the cost in terms of subsidies for slaughtered cattle is expensive, the percentage of infected cows is gradually lessening.



The practice of "designating" or certifying certain milk will probably never be practicable on a wide scale because of the difficulty of adequate, reliable inspection. Nor does certification take sufficiently into account possibilities of infection other than tuberculosis, such as scarlet fever, septic sore throat, and typhoid fever. Recently, cases of undulant fever have been reported as having been acquired from accredited herds free from tuberculosis.

Heat Treatment of Milk

Pasteurization admittedly has its failings. Machinery and methods have been perfected to a high degree of efficiency, but the human factor frequently fails, and this can be controlled or supervised only with great difficulty. Moreover, standards regulating the process vary widely according to communities; pasteurization may mean something entirely different in one city from what it does in another. Efforts, however, are now being made by the U. S. Public Health Service to restore order out of chaos. With the aid of leading state health officers, the Service has drafted a Standard Milk Ordinance, suitable for adoption by municipalities. The particular advantage of the ordinance is that it defines clearly the many commercial and technical terms involved in milk production methods. Pasteurization, it states, "shall be taken to refer to the process of heating every particle of milk or milk products to a temperature of not less than 145 degrees Fahrenheit, and holding at such temperature for not less than 30 minutes in pasteurization apparatus approved by the health officer, the temperature and time being automatically recorded by a temperature and time recording device approved by the health officer."

No Injurious Effects

Milk properly pasteurized is not injured as a food to any appreciable extent. Apparently, vitamins A and B are not affected, vitamin C is reduced in amount, and little is known as to the fate of vitamin D. This slight loss of vitamin content may be restored in a child's feeding by the addition of a small quantity of fruit juice.

How heat at given periods of time affects the food constituents and qualities of milk, as well as certain common bacteria which may contaminate milk, is indicated in the chart.

According to the author, the American method of dealing with bovine tuberculosis is not applicable in England because the dairy business is organized on a much more haphazard and decentralized basis, making supervision almost impossible, and also because the slaughter of some 40 per cent of the dairy cattle (which would be necessary) would impoverish the state and also cause a milk famine. He suggests a practical but elaborate plan of gradually cleaning the herds. Space forbids discussion of details, which seem sound and workable.

Apparently assuming that the general practice of pasteurization would be too readily seized upon as a substitute for the more radical measure of eliminating tuberculosis among cattle, the author of the proposed English plan minimizes the value of pasteurization and speaks of it as "a confession of failure." With this feeling, American sanitarians would surely not agree. Clean milk regulations have not discouraged the campaign to free cattle from tuberculosis; that being a worthy object in itself, viewed purely from an economic standpoint. Pasteurization is not advocated as a means of making dirty milk clean. The ideal is to produce milk as clean as possible and to supplement this by heat treatment. The possibilities of contaminating this food product in its devious trips to the consumer are numerous; and pasteurization is but an added protection against tuberculosis and many other dangerous infections.

THE MEDICAL SOCIETY
OF THE
STATE OF PENNSYLVANIA

Officers' Department

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COUNCILOR DISTRICT MEETINGS AS A STIMULUS TO COUNTY SOCIETY PROGRESS*

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The subject assigned me for discussion is one upon which much may be said, but I shall endeavor to confine myself for the most part to the important points of which there are but three: (1) time of meeting; (2) place of meeting; (3) the program.

(1) The time of meeting may vary in different districts, but I believe that June or September is the most suitable. The winter months are considered impossible on account of seasonal illness and the inclement weather. Mid-summer is not to be considered, since many members are on vacation, and good speakers are not available, many of the teaching men being in Europe, or elsewhere. I believe September is the banner month. The members have returned from vacation and are not satiated with medical meetings. A councilor district meeting is an excellent way to begin Fall and Winter medical society activities.

(2) The place of meeting should, as far as possible, be centrally located and easy of access. Councilor meetings in the far end of the district are as a rule poorly attended, but as the center is approached the attendance increases proportionately. There may be exceptions to this general rule. There may be certain remote districts where interest in the county society is waning and needs stimulation. An interesting councilor meeting may be the means of bringing the profession together. Again, it may be that active and interested members being far away from cities are eager and anxious to have the meeting brought to them and are willing to help arrange such a meeting. In cases such as these there can be no objection to taking the meeting occasionally to such a corner of the district. We are especially fortunate in the Second District in having historic Valley Forge Park with its excellent hotel, Washington Inn, in the center of the district. This in itself is a great drawing card, and is the unanimous choice of the secretaries and the councilor as the place of meeting.

(3) The time to begin arranging the program for a given annual meeting is immediately after the last meeting. We cannot begin too early. We of the Second District have formed the habit of having a dinner conference some time during the winter. The preliminary conference is attended by the district councilor and the secretaries of the several county societies composing the district. Every county in our district was represented last year. Plans for the coming councilor meeting, with suggestions as to choice of speakers, are first thoroughly discussed, after which each secretary is called upon to give a brief résumé of the conditions in his county society, and the problems he has faced during the year. In this manner the secretaries are brought in closer touch with each other, and the councilor is given a much better understanding of the societies in his district than he can possibly obtain from many visits.

It is difficult to arrange a program to suit every one. The surgical program may not suit the internist, and vice versa. This can be partially overcome in certain districts where good hospitals are available by devoting the morning to various clinics. The staff of the average hospital would, no doubt, be only too glad to coöperate in this way. We believe that two good papers are sufficient—one by a master in his art, on a strictly medical or surgical subject; and another paper, not ultrascientific, but related to some phase of medical practice. By way of illustration, in 1928 we heard Dr. Howard A. Kelly on "The Life of John Hunter," and this

* Read before the Secretaries' Conference, Harrisburg, December 3, 1929.

year Dr. Joel T. Boone on "Common Sense in the Practice of Medicine."

The aforesaid type of papers should form the backbone of the program, but they may be prefaced by a one-minute report from each district censor, as was done this year in the Fifth and Second Councilor District meetings. The one-minute report should include mention only of the number of members in the county society represented, the names of members who have died during the year, and a brief reference to the degree of interest in scientific programs, with mention of any outstanding work accomplished by the society during the year. The entire number of these reports should take but five or six minutes' time, but should be most interesting and helpful in fixing the boundaries of the district in the minds of those present.

I believe an excellent addition to a councilor meeting program may be found in a ten-minute sketch of the medical history of some one county in the district. Such papers should be interesting, not only at the time read, but should furnish invaluable contributions to the preparation of the medical history of Pennsylvania, which must be undertaken soon by our State Society. After hearing this and the two principal papers, five-minute talks by officers of the State Society, and a few other invited guests will round out a most interesting afternoon. Of course it goes without saying that the program is preceded by a dinner. Physicians can be expected to attend, in unusual numbers, only meetings where there is either a feed or a fight.

The speakers should be selected with the greatest care. They should be men with the widest reputation in the subject they are to present. The better the reputation of the essayist the greater will be the success of the meeting.

Who should be invited to councilor district meetings? Every physician in the district who is a member of a county society, and every physician who is eligible to membership. Of course it is impossible for the State Secretary, who sends out the notices, to know who the eligibles are, but it should be the duty of the county secretary or membership committee to furnish the list to the Councilor or the State Secretary, in order that all eligible physicians may be brought in direct contact with the county societies, at least for the first time, through a councilor district meeting with its rather broad and unusually attractive style of program.

A snappy councilor district meeting may prove one of the greatest attractions toward bringing eligible physicians into the county society. Such men in attendance should be approached by the membership committee and invited to unite with their county society. Much missionary work can be done at district meetings.

Some years ago the by-laws of the State Society stated that a councilor district meeting should be held every second year, and a censorial district meeting the intervening year. Each censorial district was composed on the average of about three counties. The by-laws have since discarded censorial district meetings, and state that councilor district meetings shall be held at least once each year. I believe it would be a great stimulus to the profession if we could get together by groups of two or three counties once or twice during the year and have clinics or speakers as we do at the larger councilor meetings, and your Board of Trustees will always be found ready and eager to assist such meetings and coöperate in every manner. The Board will assist in obtaining speakers, will be glad to pay the traveling expenses incurred by them, will mail the notices to each member, in fact will help so much and dictate so little that all other medical societies except the County, State, and American Medical Association should, in time, pass out of the needs and experiences of our county society members.

Let me emphasize the necessity of having the woman's auxiliaries of the district hold a combined meeting at the same time and place as the men, but with an entirely separate meeting and program. The ladies probably do not care to hear the scientific papers, but they are greatly interested in getting together and having their own speaker. Many a doctor attends the meetings of the Second Councilor District because his wife insists on going to Valley Forge that day to attend the woman's auxiliary meeting. The ladies of our members' families who are not members of the auxiliary should be as welcome as those who are members, and such meetings, as in the men's case, should be a stimulus to increase not only the auxiliary membership, but interest in medical organization problems.

THE YELLOW INSERT

We publish in this issue of the Journal the familiar yellow insert which appears annually, presenting two forms for the use of our readers who may be disposed to contribute to the Medical Benevolence Fund of our State Society, or to remember the Fund by a gift in the form of a bequest.

The demands upon the income from the investments for the Fund have never been greater than at the present time, there now being seven beneficiaries receiving monthly or quarterly payments, which in every instance (including the

widow of a former member and her children) has assisted in enabling the beneficiary to remain amidst home surroundings. The Fund, which now totals approximately $61,000, has accumulated chiefly from the annual allotment set aside from each State Society member's dues, but has also in the past three years been enriched in the sum of $2,597 contributed by the Woman's Auxiliary to our State Society and the auxiliaries to a great number of our component societies.

The response to the yellow insert published each year since 1926 has not been particularly encouraging. However, our Committee on Medical Benevolence and the Board of Trustees deem it advisable to publish it from time to time not only to encourage contributions and bequests, but to spread knowledge among the members of the component societies of the existence of the Fund, and the desire of the Benevolence Committee to have their attention called to possible future beneficiaries. It is the hope, therefore, of the sponsors of this blank that each member of the Society read the facts stated thereon.

DISTRICT COUNCILORS

The death of former President Lawrence Litchfield, which removes from the Board of Trustees one of its most experienced and valuable members, reminds us at this time of the great need of care in choosing any member of the Society for elevation to the high office of Trustee and Councilor.

The term of office, as Trustee and Councilor, of Frederick J. Bishop of Lackawanna County, and former chairman, J. B. F. Wyant of Armstrong County, will expire in October, 1930. Upon the 1930 House of Delegates will devolve the duty of electing a successor not only to Dr. Litchfield, to serve until 1932, but also successors to Drs. Bishop and Wyant to serve until 1935. The Board of Trustees at their February 4 meeting will choose a successor to Dr. Litchfield to serve until the 1930 meeting of the House of Delegates.

The House of Delegates will depend upon the members of the House representing the component societies composing the Second Councilor District (Berks, Bucks, Chester, Delaware, Montgomery, and Schuylkill Counties), the Ninth Councilor District (Armstrong, Butler, Clarion, Indiana, Jefferson, and Venango Counties), and the Tenth Councilor District (Allegheny, Beaver, Lawrence, and Westmoreland Counties) to recommend worthy candidates to fill these vacancies. It is therefore strongly to be hoped that the leading members of the above-mentioned county medical societies will not only consider this problem, but will confer with each other, so that the 1930 House may choose such successors to Drs. Litchfield, Bishop, and Wyant as will be willing at all times to make the necessary sacrifice of time and energy to serve their various constituencies in a fitting manner. We consider the office of Trustee and Councilor the most important office in our State Society organization.

SECRETARIES COME AND GO

There has recently been an unusual number of changes in the office of secretary in our component societies. We note with mingled feelings of regret and joy the passing, after many years of faithful service, from the office of secretary to that of president, of the following: John M. Beck, who served as secretary of Huntingdon County Medical Society for nineteen years; John M. Quigley, who served as secretary of Clearfield County Society for sixteen years; and Joseph J. Meyer, who served as secretary of Cambria County Society for seven years. To all of these we wish success in their administration, and to their newly chosen successors, John M. Keichline, J. Paul Frantz, and Harold M. Griffith, respectively, we commend the hearty coöperation of all the members of their various county medical societies, as well as to other new secretaries in the ranks; namely, Albin R. Rozploch, who succeeds Walter E. Egbert, secretary of Delaware County Medical Society for eleven years; Jonathan B. Perrine, who succeeds Edith MacBride (now Mrs. Allen Dexter), secretary of Mercer County Society for ten years; and James G. Flynn, who succeeds Samuel G. Logan, secretary of Elk County Society for eight years.

THE 1930 HONOR ROLL

On January 23, 1929, the State Society dues for 1,018 members had been received at the office of the Secretary; on January 20 this year, the dues of 1,444 members had been received. Considering the recent stock market decline in values as an excuse for nonpayment of obligations, we interpret this splendid showing as indicative not only of sound investment habits among our members, but as evidence of deep appreciation of the importance of continuous membership in the county medical society.

Fifty per cent or more of the members of the following county societies have paid their 1930 dues: Juniata County, 100 per cent; Elk County, 82 per cent; Montour County, 74 per cent; Montgomery County, 65 per cent; Berks

County, 63 per cent; Greene County, 62 per cent; York County, 58 per cent; Mifflin County, 57 per cent; Schuylkill County, 57 per cent; Columbia County, 56 per cent; Clarion County, 50 per cent; Perry County, 50 per cent; and Somerset County, 50 per cent.

It should be remembered at this time that members whose 1930 dues remain unpaid after March 31 shall forfeit all the benefits of Medical Defense protection by the State Society from that date until the date of payment of same.

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to January 15:

ADAMS: *Death*—Charles L. Myers, York Springs (Univ. of Md., '88), Dec. 21, aged 65.

ALLEGHENY: *Resignation*—John J. Munden, Alliance, O.; E. Robert Wiese, Schenectady, N. Y. *Removal*—Ellis L. Noble from Sterling, O., to 137 E. Market St., Akron, O. *Death*—J. Floyd Murdoch, Sewickley (Jeff. Med. Coll., '93), Jan. 7, aged 61; Marcus E. Baldwin, Pittsburgh (Balt. Med. Coll., '00), Nov. 10, aged 63.

BERKS: *Transfer*—Alice S. Bush, 245 N. Fifth St., Reading, from Northumberland County Society.

BLAIR: *Reinstated Member*—John C. Noss, 1200 Fourteenth Ave., Altoona.

BUCKS: *New Member*—Mary E. Lehman, 316 Radcliffe St., Bristol. *Transfer*—Albert A. Gonzales, Croydon, from Armstrong County Society.

CAMBRIA: *Death*—Francis Schill, Johnstown (Jeff. Med. Coll., '97), Nov. 26, aged 64.

COLUMBIA: *New Member*—Edgar A. Marquard, Berwick.

CRAWFORD: *New Members*—John H. Bailey, Kenneth A. Hines, Meadville.

CLEARFIELD: *New Member*—Samuel L. Earley, Irvona.

FAYETTE: *Transfer*—Max Harris, Brownsville, from Allegheny County Society. *Removal*—Domenico Rosati from Uniontown to 308 Franklin St., Aliquippa (Beaver Co.).

JUNIATA: *New Member*—Joseph W. Harshberger, Thompsontown.

LACKAWANNA: *New Members*—Charles F. La Belle, Dunmore; Leonard F. McGovern, Mayfield; Edward F. McDade, 1021 S. Main Ave., Scranton.

LEHIGH: *New Member*—Karl H. Langenstrass, Allentown State Hospital, Allentown. *Resignation*—William F. Clark, Allentown; Harrison B. Kern, Slatington. *Death*—Calvin J. Otto, Allentown (Jeff. Med. Coll., '84), Dec. 21, aged 70.

LUZERNE: *Reinstated Member*—John R. Burns, 246 Scott St., Wilkes-Barre.

LYCOMING: *Transfer*—Clarence Klaer, Warrensville, from Clinton County Society.

MERCER: *Transfer*—Norman R. Benner, 442 Center St., Johnsonburg (formerly of Farrell) to Elk County Society.

MONTOUR: *New Member*—Francis W. Davison, Geisinger Memorial Hospital, Danville.

MONTGOMERY: *New Member*—William L. Pauling, Erdenheim. *Resignation*—John A. Logan, Washington, D. C.

NORTHUMBERLAND: *Resignation*—Frederick O. Zillessen, Sunbury.

PHILADELPHIA: *Resignation*—E. Paul Kitchin, Philadelphia. *Death*—James D. Brittingham, Philadelphia (Med. Chi. Coll., Phila., '99), Dec. 14, aged 60; Philip H. Moore, Philadelphia (Jeff. Med. Coll., '02), Dec. 18, aged 63.

WARREN: *New Member*—J. Theodore Valone, 416 Market St., Warren.

WESTMORELAND: *Resignation*—William F. H. Koegel, Philadelphia.

YORK: *Death*—Samuel K. Pfaltzgraff, York (Univ. of Md., '86), Nov. 22, aged 65.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since December 16. Figures in first column indicate county society numbers; second column, State Society numbers:

1929					
Dec.	16	Montgomery	20-50	139-169	$232.50
	18	Blair*	103	7841	7.50
		Clarion	1-6	170-175	45.00
		Huntingdon	1-7	176-182	52.50
		Luzerne*	302	7842	7.50
	19	Somerset	1-2	183-184	15.00
		Warren	1-3	185-187	22.50
	23	Schuylkill	51-66	188-203	120.00
	24	Montour	1-10	204-213	75.00
	26	Lehigh	4-8	214-218	37.50
	27	Montour	11-13	219-221	22.50
	31	Montour	14-15	222-223	15.00
		York	1-20	224-243	150.00
Jan.	6	Lackawanna	1-68	244-311	510.00
		Schuylkill	67-80	312-325	105.00
		Columbia	1-18	326-343	135.00
		Mifflin	4-9	344-349	45.00
		Somerset	3-9	350-356	52.50
		Juniata	1-2	357-358	15.00
		Northumberland	6-8	359-361	22.50
		Mercer	3	362	7.50
		Franklin	1-13	363-375	97.50
		Clearfield	1-6	376-381	45.00
		York	21-28	382-389	60.00
		Montgomery	51-75	390-414	187.50
		Clarion	7-9	415-417	22.50
		Crawford	1-4	418-421	30.00
	10	Elk	18	422	7.50
		Clearfield	7-17	423-433	82.50
		Franklin	14-22	434-442	67.50
		Adams	1	443	7.50
		Elk	16-17	444-445	15.00
		Erie	1-6, 8-20, 22	446-465	150.00
		Bucks	1-28	466-493	210.00
		Northumberland	9-12	494-497	30.00
	14	Lycoming	7-52	498-543	345.00
		Montgomery	76-100	544-568	187.50
		Somerset	15-19	569-573	37.50
		Indiana	1-19	574-592	142.50
		Delaware	4-35	593-624	240.00
		Huntingdon	8-13	625-630	45.00
		Montour	16	631	7.50
		York	29-42	632-645	105.00
		Somerset	10-14	646-650	37.50
		Clarion	10-13	651-654	30.00
		Juniata	3-8	655-660	45.00
		Delaware	36	661	7.50
	15	York	43-58	662-677	120.00
		Lawrence	2-12	678-696	142.50
		Delaware	37-47	697-707	82.50
		Fayette	1-27	708-734	202.50

THE EIGHTIETH ANNUAL SESSION

Father Time has again ushered in a new year and it now behooves every physician in the State so to arrange his or her affairs that attendance at the convention of the Medical Society of the State of Pennsylvania to be held at Johnstown, Pa., October 6th-9th, may be a matter of fact.

* Indicates 1929 dues.

The Society needs you; you need the Society; therefore, mutual benefits must naturally follow attendance.

The Cambria County Medical Society is fully intent your attendance will bring to you both pleasure and profit, as every effort is being put forth to make the convention of 1930 all that could be desired.

The chairman of the general committee on arrangements, Dr. Olin G. A. Barker, informs this committee that all arrangements are progressing rapidly and all will be in readiness to entertain this great body of medical men of the State of Pennsylvania this coming October.

As time goes on the JOURNAL will note in detail the features and progress of affairs so that every physician in the State may have full knowledge thereof.

THE CAMBRIA COUNTY MEDICAL SOCIETY,
THE COMMITTEE ON PUBLICITY.

County Society Reports

INDIANA—JANUARY

The Indiana County Medical Society gave every evidence of being a very much alive organization at the January meeting held at the Indiana Country Club. Fifty-six members and friends gathered around the banquet table with Dr. H. B. Buterbaugh as toastmaster.

Following the banquet, the business and scientific sessions were held. The officers elected for 1930 were: Dr. E. F. Shaulis, president, and Dr. A. H. Stewart, secretary.

Dr. A. H. Colwell, of Pittsburgh, delivered an address on "The Doctor's Compensation." Drs. W. H. Mayer, Jacob, and Anderson, of Pittsburgh, gave short, interesting talks. The guests from Jefferson County presented good wishes.

The secretary's report for the year shows 1929 to have been one of the best years in the history of the society and there is bright hopes for better and bigger things the coming year.

A. H. STEWART, M.D., *Secretary.*

LUZERNE—NOVEMBER

A regular meeting was held on November 20th in the Medical Building, with President Fischer in the chair. There were sixty-three members and five visitors present.

Drs. A. W. B. Desjardins and L. L. Rogers read very interesting papers on "Traumatic Injuries of the Forearm and Wrist," with lantern slides. These papers were discussed by Drs. Ahlborn, M. C. Rumbaugh, Howorth, Mengel, and Baker, with Drs. Desjardins and Rogers closing.

Mr. Cyril E. Maire, of Parke, Davis & Company, showed motion pictures on "How Biologicals are Made," after which the meeting adjourned.

E. T. O'DONNELL, M.D., *Reporter.*

LYCOMING—JANUARY

The regular monthly meeting of the Lycoming County Medical Society was held in Medical Hall, Williamsport Hospital, on January 10th. The following officers were elected: president, J. Frank Gordner of Montgomery; vice-presidents, Lloyd Wurster and Frank E. Rouse; secretary, Walter E. Brenholtz; treasurer, John A. Campbell; censor, Charles E. Lehman; trustees, Albert F. Hardt and Irvin T. Gilmore; reporter, Eugene Delaney; librarian, Wesley F. Kunkle.

An address on "Angina Pectoris" was delivered by Ross V. Patterson, M.D., dean of Jefferson Medical College and president-elect of our State Medical Society. Dr. Patterson said that this condition is to be considered a symptom-complex rather than a disease. It has been known and carefully studied since it was first described by Heberden in 1763. John Hunter was one of the earliest sufferers from it. The causes include all the causes of arteriosclerosis with special emphasis on syphilis and tobacco. Males are four times as susceptible as females. Usually it is a disease of individuals past fifty years, who lead a high-pressure life, such as lawyers, physicians, politicians, financiers, clergymen, etc. Exciting factors to provoke an attack include exertion, emotional disturbances, overeating, and chilling of the body surface. The physiologic pathology involves an ischemia in the distribution of the coronary arteries, usually associated with coronary sclerosis; occasionally no pathology is demonstrable at autopsy. The symptoms include pain, stenocardia, dyspnea, and fear of impending death.

The diagnosis is easy in typical cases. Pseudo-angina in young women is often difficult of diagnosis; these cases usually present agitation and are ambulatory in distinction from the "frozen" attitude of true angina. The prognosis is less unfavorable than is often supposed; it has been estimated that five and one-half years is the average duration after the initial attack —probably longer. During the attack, amyl nitrite, nitroglycerin, oxygen, and morphin are the most valuable remedial agents. The general management includes reduction in work, a reduction in weight and blood pressure where indicated, and the use of a low-carbohydrate and relatively high-protein diet. Useful drugs include the iodids, the vasodilators, among which euphalin or metaphalin are especially valuable.

Dr. William Stephenson Baer, of Baltimore, professor of orthopedic surgery at Johns Hopkins University, described his new treatment of osteomyelitis. This consists in the use of maggots obtained from the blow-fly which are inserted into the wound. Maggots attack only the dead bone and so eat up all devitalized tissue. Dr. Baer detailed the technic, illustrating his paper with motion pictures. His series includes about 90 cases to date and the results are unapproached by any other type of treatment. His work is a great contribution to modern surgery.

In the evening a banquet was served at the Lycoming Hotel which was attended by sixty-five members. Dr. L. M. Goodman, of Jersey Shore, acted as toastmaster. Dr. Patterson spoke on "Medical History, Medical Education, and Medical Practice in Pennsylvania" and traced the history of Pennsylvania medicine from the days of William Penn, the crew and passengers of whose good ship Wellcome were afflicted with smallpox on their trip across the Atlantic and were attended by Drs. Owens and Thomas Wynne. These physicians both later settled in Philadelphia. The house which Dr. Wynne built and in which he died still stands. Dr. Patterson carefully reviewed the progress made in

medicine in Pennsylvania and by Pennsylvanians through the two and a half centuries which have since elapsed. Dr. Baer spoke briefly and in a reminiscent mood to the delight of all his hearers. Dr. Charles Lehman, the retiring president, spoke of the achievements of the Society during 1929. Dr. Gordner, the president-elect, announced his committees for the new year and emphasized the need for medical leadership in public-health matters.

F. C. Lechner, M.D., *Reporter.*

PHILADELPHIA

December 11, 1929

The president, Dr. John A. McGlinn, in the chair.

Symposium on Mental Hygiene

"Biologic and Environmental Factors in Nervous Disorders with Special Reference to Mental Defects." By Albert C. Buckley, M.D., Superintendent of the Friends' Hospital, Frankford, Philadelphia.—It is accepted parlance that heredity and environment constitute two separate sets of causative factors of mental disease or defect. The earliest teachings implied that heredity and environment were antagonistic, although biologically it is often impossible to separate the two sets of influences. Inherited factors are carried in the germ plasm. The body cells of the parent play no part in the inheritance process; germ cells originate only from germ cells. Morbid body states in the parent may affect the development of the new individual just as other conditions external to the organism may affect its development, but ancestors cannot transmit characteristics which they do not possess. Inheritance is a mechanism, a phenomenal development. Though the embryo of the fish, the frog, and the fowl are at some time indistinguishable one from the other, heredity determines what the creature shall be.

Four classes of factors occur in nervous diseases—those chiefly due to heredity, those chiefly due to environment, those dependent on both, and a fourth group, which cannot be demonstrated. Six months after fertilization of the human ovum the brain has taken on many adult characteristics, and in the first six months postnatal a rapid growth of the brain occurs. The greatest growth takes place during the first seven years, although the maximum weight (40 to 50 oz.) is not attained until as late as the thirtieth year. The period of immaturity is greater in man than in any other animal in proportion to the span of life, and the nervous system is the last system to attain its full development. Among the lower grades of defects, the greater proportion is due to environmental causes; while eighty per cent of the greater defects are due to faults of the germ plasm. The remaining twenty per cent are due to developmental and environmental factors, and to accidental causes working before, during, or after birth. The mating of two feeble-minded individuals results in one hundred per cent feeble-minded offspring, and the union of normal with feeble-minded yields the mendelian ratio, with feeble-mindedness recessive. Consanguinity, therefore, is dangerous, since the forces of heredity are compounded, though a defective germ plasm is necessary for ill effects. Morbid conditions in the mother are factors in the production of abnormal children, but a normal child may be born during or after a psychosis, especially if the psychosis is due to external causes. Maternal impressions cannot be given credence. After birth, nutrition, toxins, and injuries may produce disorders. The tissues of the nervous system are the last to show ill effects from starvation.

Discussion by Dr. Clifford B. Farr.—The paper just read has given a sane and accurate outline of heredity. Heredity and environment are complementary. Consanguinity in itself is neither favorable nor unfavorable. Statistics on heredity are unreliable since strict biologic entities are not yet known. By statistics, manic depressive psychosis is of hereditary origin, and involutional melancholia is produced more by the environment. A uniform population is needed for reliable statistics, where records for generations back may be studied.

"The Treatment, Training, and Supervision of the Feeble-Minded." By Harvey M. Watkins, M.D., Superintendent of the State School at Polk, Pa.—Feeble-mindedness presents a many-sided problem, embracing etiology, prognosis, therapy, psychology, social, and legal aspects. The terms employed have been used so interchangeably that a satisfactory terminology is difficult, but we may define it as an arrest in cerebral development and include children retarded three or more years in school, whose intelligence quotient is less than 70. Under favorable circumstances they may be capable of earning a living. One to two per cent of the total population (150,000 in Pennsylvania) are feeble-minded, hence they cannot be cared for entirely in institutions, nor is this desirable, for the environment protects many sufficiently. At least half of the population is incapable of good high-school work and a fifth cannot finish grade school well. Goddard states that the feeble-minded must be pushed and led.

A comprehensive state program is being undertaken. The first problem is identification, preferably at the beginning of the school year, in the first or second grade. Special school clinics, where psychometric and other tests should be given, should be organized for early training—clinics in the control of medical hands. For diagnosis it is necessary to have a physical diagnosis, family history, past history, school history, a practical test of economic efficiency and moral reactions, psychologic tests, etc., and at the end, a weighing and evaluation of all symptoms and signs. All such children should be registered. After early identification ninety per cent become a community problem and can be cared for in special schools, where they will be given a variety of occupations and from which they can be placed by employment agencies into suitable vocations.

From four to five thousand children are cared for in Pennsylvania institutions and academically these are seldom beyond the fourth grade. Individual training is given, teaching them to use their hands (since many industries depend upon high-grade mental defectives for labor), and making adjustments and readjustments, building good bodies and habits, morals and behavior. A routine physical and mental examination is given yearly and less than four per cent have a positive Wassermann. The aim is to render them social assets. There are not enough special classes for this work in the public schools. A fourth State school is needed and epileptics should be placed in separate colonies. Coöperation of community, school, and industry is needed. The moron group, comprising twenty per cent of the feeble-minded, creates the greatest problem in supervision and holds the most hope.

Feeble-mindedness is not on the increase, but the recognition of it is increasing, especially with the trend of population toward the cities. Three main groups are more difficult than the rest—the defective degenerate, the unsocial or criminal, and the sex problem girl. In the school the girls are taught domestic work, and the

boys farm work. When the individual is placed or paroled it is carefully explained to parents or employer. Sex causes the greatest difficulty in the parole cases, with the girls more than with the boys, since they are passive, easily persuaded, and sought. The boys, noticeably different from normal, are not sought. Segregation cannot meet the situation, nor can community supervision. A further step in their care and parole is selective sterilization—a measure which would permit of a large per cent of parole, instead of the five per cent which is now possible. Vasectomy and salpingectomy are the measures advised. More than ten thousand have been sterilized in the United States, the measure being upheld by the Supreme Court, sixteen hundred in California, and fifteen hundred of these released, as a result. The adaptability of the case should be carefully considered. Twenty-four states now have sterilization laws. Sterilization should be in control of medical men who, from the indications of the particular case, may call in for consultation the law, the church, psychiatrists, etc. In considering the problem of the feeble-minded we see that we need research, medical care, and preventive medicine.

In discussion, DR. LEROY M. A. MAEDER said he had had an idea that the feeble-minded were hopeless until he visited Pennhurst and Polk, where he found children being educated in trades, and realized its sociologic significance. From England comes the report that there are eight feeble-minded per thousand and that the condition is more prevalent in the lower strata, for the individual is unable to care for himself and quickly relapses into the slums. Where the death rate of infants is lower, the rate of feeble-mindedness increases. Idiots and imbeciles are institutional cases. The moron is able to be independent only if work is available and when it is adequately supervised. In England, 67.8 per cent of the feeble-minded are partly or wholly dependent upon public support; 10 per cent of them are vagrants; and 10 per cent show criminal propensities. Twenty per cent of English criminals are feeble-minded. Sterilization of mental defectives will not eradicate feeble-mindedness, so many are the factors in its causation and so widespread the defective germ plasm. Feeble-mindedness calls for consideration from all angles.

"The General Process of Mental Hygiene." By CLARENCE A. PATTEN, M.D., of the Pennsylvania Mental Hygiene Committee of the Public Charities Association.—Mental hygiene is preventive psychiatry and embraces psychology and neurology. It aims to prevent nervous and mental disorders, to adjust environments, to aid the development of the normal, and to strengthen the weak. Correction of bad factors calls for diversely ramified study, considering heredity, economics, education, industry, domestic situations, physical condition, laws, religion, politics, etc. Psychotherapy has been practiced by all doctors for centuries and the roots of mental hygiene go deep, including all time. Mental hygiene is the science of mental health, not a cult fostered by an egotistic, undisciplined woman who through it quickly rose from poverty to wealth, a cult, totally unscientific, relying upon the bastardization of religion. Mental hygiene is fostered not by a "mother" for front-page notoriety, but by the needs of the race. It should prepare the patient for life, balancing the potentialities of the individual against the demands of life. Large-scale mental hygiene was practiced by Hoover in his business conferences after the financial depression. That was a man-sized effort to prevent nervous disorder in the nation.

All physicians should have a knowledge of the principles of mental hygiene. Many states have organized work along this line. Dr. D. J. McCarthy has done much in support of this work. National associations have been formed in Europe and in May, 1930, there will be an International Congress in Washington. The medical profession should be more familiar with neuropsychiatric disease and abolish the usual attitude that nervous and mental diseases are something that patients don't die of and from which they never recover.

MARY A. HIPPLE, M.D., *Reporter.*

WARREN—DECEMBER

The meeting was held at the Conewango Club, December 16th, with a record attendance of twenty-seven members and one guest. This represents nearly sixty per cent of the membership.

The secretary, Dr. Eaton, gave a report on the recent conference of secretaries held in Harrisburg. As a result of his report, a committee was appointed to investigate the activites of various welfare organizations in this vicinity.

Dr. Otterbein, director of the General Hospital laboratory, gave a report of a number of cases in which laboratory procedures established the diagnosis after many attempts at treatment without such help.

A group of cases with symptoms of a meningeal type, mostly in children, was reported. In some there were ear symptoms which were possibly septic, and in others the meningococcus was found in the spinal fluid. Some of these cases are too recent to judge the outcome, and others have recovered. Whether or not they are true cerebrospinal fever has not been determined.

The hosts for the meeting were Drs. Durham, Frantz, Flatt, E. G. Hamilton, and Haines.

M. V. BALL, M.D., *Reporter.*

The Woman's Auxiliary to the Medical Society of the State of Pennsylvania

MRS. WILDER J. WALKER, *Editor*
546 South Street, Greensburg, Pa.

THE MONTHLY MESSAGE OF THE PRESIDENT

"Well, what I'm interested in is learning how to live longer. That's what I'd like somebody to talk about."

This wish was expressed at an Auxiliary luncheon in December by the woman sitting next to me. Can't you all just hear the reply, chanted antiphonally and in chorus, by everybody within earshot—"Go and have your periodic health examination. That's what it's for!"

And there is no earthly doubt that the choristers were right, for frequent inspection of our bodily engines and early correction of their troubles will just as surely prolong their lives as will similar treatment be successful with our Rolls-Royces.

Don't forget another point, of equal importance, that the recent marked extension of life expectancy applies almost exclusively to the *first*

five years. It is on infancy and early childhood that attention and effort have been focused, and with brilliant results. Very little progress has been made at the other end of the scale, and alas, none of us are growing younger. With such an object lesson before their eyes, isn't it extraordinary that those most vigorously enjoying their prime, and most eagerly looking forward to many years of activity, should neglect the first and most obvious means of attaining that coveted goal, a green old age?

Confronted by this anomalous situation, the Board determined to follow up Mrs. Forcey's vigorous campaign of last year for periodic health examinations by the appointment of a standing committee, with Mrs. John H. Page, of Austin, Potter County, as chairman. Mrs. Page has studied the subject carefully from all angles, has collected considerable literature, and at this writing (January 10th) is engaged in preparing a definite plan of campaign for presentation to the Board at its meeting in Altoona on February 7th. The State Health Department is lending its assistance, and of course nothing is ever undertaken without the full approbation of Dr. Sharpless and of the newly appointed Advisory Committee of the State Medical Society.

Another point. The federated women's clubs are on record as sponsoring periodic health examinations. Most of our members are also members of women's clubs, and many are on their boards. Will you push this project as vigorously as possible, and endeavor to interest your club members individually in having an examination?

Health is a subject engaging continually more attention. It is all the rage. Health work is the Auxiliary's prime responsibility, the reason for our organization. We should take the lead in this above all other movements. We must take advantage of its present vogue to develop the *habit* of periodic health examination, first for ourselves and our families, then for our friends.

The combination of ability and opportunity constitutes a call to do a given piece of work. If ever a group of women were called to a great work, it is we, members of this Woman's Auxiliary, and the time to do it is right now, before Health Week, May, 1930.

Will not you who read these lines, man or woman, make a date with your family physician between now and May? Will you do as much for your family as for yourself? I have already taken out this form of life insurance. Can you afford to be without it?

Faithfully yours,

Corinne Keen Freeman, *President*.

STATE ADVISORY COMMITTEE

Dr. Sharpless has announced the appointment of the following as members of the Advisory Committee: Chairman, Dr. Edgar S. Buyers, Norristown; Dr. J. Allen Jackson, Danville; Dr. Charles H. Miner, Wilkes-Barre; Dr. Charles C. Ross, Clarion; Dr. Thomas G. Simonton, Pittsburgh.

We hope to call often on these gentlemen to approve our activities, to guide us around pitfalls, and to help us to do a real service to the cause of health.

CIRCULAR LETTER TO PRESIDENTS OF COUNTY MEDICAL SOCIETIES TO WHICH THERE IS NO WOMAN'S AUXILIARY

With the sanction of Dr. William T. Sharpless, to whom I have submitted a copy of this letter, I beg to bring to your attention the enclosed copy of a program of public health work sent by Dr. Appel to me as President of the Woman's Auxiliary to the Medical Society of the State of Pennsylvania. Similar programs have been mapped out for every county in the State, each applicable to local conditions. They embrace three subjects—dental hygiene, nutrition, toxin-antitoxin and the Schick test—and, as you see, are very clear and very specific in their instructions. No work is to be started without previous consultation with the proper authorities, and everything is to be done under expert guidance.

As you of course know, there is no Woman's Auxiliary to your own County Medical Society, and perhaps hitherto you have seen no particular need for one. With the thought that Dr. Appel's request may put a different aspect on the matter, I am sending you his program and beg that you will present it with this letter to your County Society Board. If after further consideration you desire the formation of an Auxiliary to undertake this or any other work you might care to designate, I shall be delighted to put you in touch with the District Councilor of the Auxiliary in charge of your county, who will gladly take the matter in hand.

You understand that the Auxiliary always plays the part of Esther, and makes no move until the golden scepter is extended. May I not hope that you will play the rôle of a gracious Ahasuerus?

"Oh, king, live forever!"

Sincerely yours,

Corinne Keen Freeman.

COUNTY HEALTH PROGRAMS

Lackawanna.—The toxin-antitoxin program in Lackawanna County has been generally covered. This procedure is for the purpose of immunizing the children against diphtheria. A recent survey, however, indicates that the Schick testing, which is carried on six months after the administration of toxin-antitoxin for the purpose of discovering whether or not the child has been actually immunized, has not been generally applied. It therefore appears that this important phase of the diphtheria protection work could be very logically undertaken by Lackawanna County's Auxiliary.

The first necessary step in this connection is for the auxiliary to interest the county medical society in furnishing doctors to do this work, only, however, after the superintendent of schools has been visited and his sincere support of the movement obtained. It will be necessary, of course, to divide the county into workable

districts including all schools, public, private, and parochial within the jurisdiction. In addition, it will be necessary to prepare a form of notification regarding the proposed test that will reach every parent.

The State nurses in that jurisdiction will be available for preparing the necessary details and making the arrangements.

Upon receiving the local auxiliary's reaction to this suggestion, the necessary assistance from the central office as well as from the field personnel will be given in order that this work may be developed and completed in a satisfactory manner.

It is suggested, before any activity is begun by your county unit, that those who will direct the work consult the medical director who will coöperate with you.

Schuylkill.—A review of the situation in Schuylkill County indicates that the Woman's Auxiliary to the State Medical Society could profitably develop a dental hygiene program in that jurisdiction. This county is fortunate in possessing dental hygienists, who work in the schools and from whom assistance in the program to be outlined may be obtained.

A systematic, county-wide organization is urged for securing the necessary corrections in the teeth of children, which involves filling as well as extraction work. It is established that in most counties dental cavities head the list for corrections following medical inspection in schools. It is one of the department's most difficult problems to secure corrections where there is lack of finance and a full realization by parents as to the necessity for this work. As is well known, bad teeth are one of the main handicaps in young life and a source of infection in later years.

To develop a piece of work of this character satisfactorily, it will be necessary to divide the county into districts, selecting a definite location (or locations) for the work to be carried on, and then make detailed arrangements for conveying the children to the designated point or points. Local motor clubs, ambulance service of a hospital, Red Cross motor corps, and private automobiles can be utilized for this purpose.

It is essential to obtain the name of a dentist from the State Dental Society who would do this work either with or without pay. If pay is required, then funds should be raised locally. The president of the State Dental Society is Dr. E. T. Jackaway, 1506 E. Susquehanna Ave., Philadelphia.

Before proceeding with a program of this kind it is suggested that you obtain preliminary details direct from Dr. C. J. Hollister, chief of the State Health Department's dental section, after which the county medical director and the State nurses should be advised, in order that they can render you personal assistance.

Snyder.—The necessity for a nutritional program among school children in Snyder County is apparent to the Department. It is believed that a splendid piece of work can be accomplished by the Woman's Auxiliary in your jurisdiction if it will interest itself in this special feature.

In this connection, arrangements should be made for all school children who are ten per cent or more underweight to be supplied with a glass of milk both in midmorning and in mid-afternoon.

To carry out this program properly it will be necessary to interest the respective school authorities in the school districts of your county so that funds may be obtained from them for the purpose of distributing free milk to that proportion of the pupils unable to pay for it. It is customary in jurisdictions where this work is now conducted for the parents, who can afford it, to pay for the milk on a cost basis.

Undernourishment is one of the main factors in backwardness and illness in the school life of children. It operates to devitalize the body, breaking down natural resistance and thus opening easy avenues for disease, contagious and otherwise. The value of eliminating this condition is incontestable.

While it is realized that the furnishing of milk to undernourished students is only one of the factors in the building-up process, it is nevertheless an essential one but should be supplemented, where visiting teachers or school nurses are available, with follow-up work in the homes. Even though visiting teachers and nurses are not operating in your county the milk feature alone justifies your interest.

Before proceeding with this work, it is suggested that you communicate with the county medical director and the state nurse, both of whom will render you personal assistance and furnish you with further details.

If your organization seriously considers an attempt along the lines outlined, kindly notify J. C. Funk, Director, Bureau Public Education, State Health Department, in order that he may be able to make arrangements with the Department of Public Instruction for complete coöperation with you and the Department of Health in this project.

COUNTY AUXILIARY REPORTS

Allegheny.—The first meeting of the new year will be held on Tuesday, January 28th. This meeting will be combined with the Councilor District meeting. The first *Auxiliary Year Book* and membership list will be published this month.

The Student Loan Fund, which had its inception during the presidency of Mrs. Theodore Baker a year ago, is growing. Mrs. Orr and a group of interested women are planning an attractive benefit for carrying on this work.

Blair.—Mrs. A. S. Kech, president, has completed plans for a dinner dance to be held at the Penn Alto Hotel at 6.30 on the evening of February 7th. It will be held in honor of the State Board members who will be in session in Altoona that day. A delightful program is being arranged with State speakers to give the addresses of the evening. Mrs. Paul Epright is the general chairman.

Butler.—The annual Christmas meeting was held at Memorial Hospital. The auxiliary furnished trees, toys, and decorations for the children's ward and donated four chairs to the ward. The State president, Mrs. Walter J. Freeman, is expected on January 30th.

Cambria.—The regular meeting was held in the Nurses Home of the Memorial Hospital, Johnstown, December 12th, at 8 p. m. Mrs. R. M. Palmer presided at the meeting. Dr. Palmer spoke on the "Deformities of Childhood." Following the scientific meeting a social hour of bridge with refreshments was enjoyed.

The officers for 1930 are: president, Mrs. R. M. Palmer; first vice-president, Mrs. Joseph J. Meyer; second vice-president, Mrs. J. W. Barr; secretary, Mrs. C. M. Harris; treasurer, Mrs. Arthur Miltenberger.

The next meeting will be held at the Nurses Home of the Memorial Hospital, January 9th. Plans for the State meeting, which will be held in Johnstown, October 6 to 9th, will be discussed. Mrs. Joseph J. Meyer,

the general chairman, has announced her convention committee chairmen and vice-chairmen.

Erie.—Only a board meeting, the main purpose of which was to appoint a nominating committee for the election of officers on January 16th was held in December. Mrs. Maxwell Lick was named chairman of this committee. Mrs. Theobald Flynn was appointed to prepare the data for the county for the committee on archives of the State auxiliary.

As part of the program of the State conference of the Pennsylvania Tuberculosis Society, on January 14th, will be given the dinner session for the nurses, with Mrs. Viola Hodgson, assistant director of the national organization for public health nursing as speaker and guest of honor. Mrs. C. G. Strickland is included in the committee on arrangements and all the auxiliary members will be invited to attend and it is hoped they will do so.

Huntingdon.—The auxiliary met in the American Legion Community Home, December 12th, after a luncheon given by the County Medical Society. There were two guests, Mrs. Walter Jackson Freeman, of Philadelphia, and Mrs. A. S. Kech, of Altoona.

Mrs. Freeman gave an interesting talk on the work of the auxiliary and Mrs. Kech told for what the Benevolence Fund stood. Dr. Gladys Newlin of the local society gave first-hand information regarding the need of dental work in the country districts.

The following officers were elected: president, Mrs. John M. Beck; vice-president, Mrs. Marshall B. Morgan; secretary-treasurer, Mrs. John M. Keichline.

Lancaster.—The December meeting was held at the home of Mrs. John Herr, Landisville. About thirty members were present. Mrs. Carrol Lowell was elected to membership. A musical program was given by members of the society. Dr. Anna Klemmer talked on "Periodic Health Examinations." The next meeting will be held at the home of Mrs. Kearney Smith.

Lycoming.—At the December meeting the following officers were elected: president, Mrs. W. S. Brenholtz; first vice-president, Mrs. George Drick; second vice-president, Mrs. J. F. Gordner; third vice-president, Mrs. Ada C. Milnor; recording secretary, Mrs. J. L. Mansuy; corresponding secretary, Mrs. James Burrows; treasurer, Mrs. Warren Shuman; directors, Mesdames Nutt, Youngman, Decker, and Lyon. Especial mention was made that Mrs. Drick has served as treasurer for five years, or ever since the organization of the auxiliary, this year declining reëlection. The auxiliary appreciates very much Mrs. Drick's faithfulness in this office.

A valentine luncheon and meeting of the auxiliary, with Mrs. Walter Jackson Freeman as guest of honor, will be held in the Woman's Club on February 14th. The Williamsport Hospital was donated $500. With deepest regret we record the death of Mrs. Elizabeth Senn, one of our charter members.

Northampton.—The regular monthly meeting was held, December 11th, at Hotel Bethlehem, Bethlehem. Following luncheon, Mrs. Walter Jackson Freeman, State president, gave a talk. At the business meeting at which Mrs. H. F. Leibert, president, presided, the report of the nominating committee was accepted. The result of the election was as follows: president, Mrs. W. G. Tillman, Easton; vice-president, Mrs. J. C. Longacre, Weaversville; secretary, Mrs. J. J. Groner, Easton; treasurer, Mrs. G. A. Petrulias, Bethlehem.

The treasurer reported a balance of $85.45. Mrs. A. S. Gabor, of Bethlehem, was elected to membership.

Philadelphia.—The Woman's Auxiliary met Tuesday, December 17th, in the Society Building. Mrs. Wilmer Krusen presided. Mrs. Myer Solis-Cohen, representative on the mayor's committee for "Cleaner Philadelphia," was authorized to sponsor a model mile. Mrs. Walter Jackson Freeman, State President of the Auxiliary, told of some of the plans for work in the auxiliaries. "A Health Day Program" in every woman's club is expected.

Mrs. G. M. Tull, chairman of program, introduced the speakers, who briefly outlined "The Contribution the New Century Club Has Made to the Social Service and Welfare of Philadelphia"; "The Wards of the City's Department of Public Welfare," Mrs. Murdock Kendrick; "The Work of the Legal Protection Committee," Miss E. A. Tryon; "The Country-Week Association," Mrs. Daniel R. Harper. The valuable service rendered by this group of women is inestimable, and the subjects were interestingly presented.

Among our guests were Mrs. J. B. Roberts, a former president of the New Century Club, and Mrs. Lippincott, first president of the auxiliary to the New Jersey State Medical Society, who extended greetings.

A social hour followed, Mrs. Howard Reifsnyder and Dr. Clara M. Hammond McGuigan presiding at the tea table. Special hostesses for the day were Mrs. W. E. Parke and Mrs. F. S. Baldi.

Washington.—The date of the entertainment to be held by the Auxiliary has been changed to January 9th, because it is the only open date of one of the principal entertainers. A progressive dinner will be given in the ballroom of the George Washington Hotel at 6.30 p. m. Following the dinner a musical program will be given by Mr. Will Rhoades, of Pittsburgh.

The February meeting will be a historical one. The county has been divided into four sections and members of the auxiliary have arranged to discuss the history of the medical profession in Washington county and especially of the Washington County Medical Society of their sections. An interesting session is anticipated.

Westmoreland.—The monthly meeting was held in the Elk's Club at Greensburg, January 7th. The business meeting was preceded by a luncheon with twenty-two members present. Dr. Charles Colwell, of Pittsburgh, gave an interesting talk on the "Golden Age of Medicine." An invitation to the district meeting to be held in Pittsburgh, January 28th, at the Hotel Schenley, was read.

The next meeting will be held in the Elk's Club on the evening of February 4th. We hope to have as honor guests Mrs. Walter J. Freeman and Mrs. James I. Johnston. An interesting program is being arranged.

Medical News

Deaths

William T. Morton, M.D., of Philadelphia; Jefferson Medical College, 1891; January 15.

J. Floyd Murdoch, M.D., of Pittsburgh; Jefferson Medical College, 1893; aged 61; January 7.

Lawrence Litchfield, M.D., of Pittsburgh; Bellevue Hospital Medical College, 1888; aged 68; January 15.

Hiram Allan Reed, M.D., of Philadelphia; Jefferson Medical College, 1876; aged 80; December 29.

William B. Christine, M.D., of Scranton; University of Pennsylvania School of Medicine, 1877; aged 76; January 24.

FRANCIS A. HARE, M.D., of Washington; University of Pennsylvania School of Medicine, 1919; aged 36; in November, of heart disease.

CHARLES ANDREW WEBSTER, M.D., of Pittsburgh; Temple University School of Medicine, 1915; aged 46; July 7, of bronchopneumonia.

CHARLES L. MYERS, M.D., of York Springs; University of Maryland School of Medicine, 1888; aged 65; December 21, of uremic poisoning.

HUBBERT SAMUEL PHILLIPS, M.D., of Dunmore; Hahnemann Medical College and Hospital, 1884; aged 85; October 30, of chronic myocarditis.

WILLIAM J. LOCHMAN, M.D., of Allentown; University of Pennsylvania School of Medicine, 1871; aged 79; December 30, from the effects of a fall.

THOMAS WILLIAMS STEPHENS, M.D., of Pittsburgh; Hahnemann Medical College and Hospital, 1893; aged 59; November 7, of perforated gastric ulcer and peritonitis.

TALLYRAND DESAIRE MYERS, M.D., of Palo Alto, Calif.; aged 82; December 26. Dr. Myers was an ophthalmologist and practiced in Philadelphia for a number of years.

GEORGE S. TRAVIS, M.D., of Stroudsburg; Baltimore Medical College, 1896; aged 59; January 22, overcome when his car stalled and he attempted to walk to the aid of a hunter who had been accidentally shot.

ALBERT VANDER VEER, M.D., of Albany, N. Y.; December 19; aged 89 years. Three sons, physicians, survive, one of whom is Dr. James N. Vander Veer, president of the New York State Medical Society.

WILLIAM M. MEIGS, M.D., of Philadelphia, from bronchopneumonia; December 30; aged 77. Although Dr. Meigs was graduated from the medical school of the University of Pennsylvania, 1875, he never practiced medicine. He was admitted to the bar in 1879, and followed legal practice.

CALVIN J. OTTO, M.D., of Allentown; Jefferson Medical College, 1884; at one time assistant surgeon at the Allentown Hospital; on the surgical staff of the Sacred Heart Hospital; and surgeon for the Lehigh Valley railroad; aged 70; December 21, following a stroke while driving his car.

BOOTH E. MILLER, M.D., of Harrisburg; University of Pennsylvania School of Medicine, 1909; staff physician at the Harrisburg State Hospital, where he was attacked by an inmate when making his regular inspection; aged 45; January 8. Dr. Miller's throat was slashed, severing the jugular vein, and he died within fifteen minutes.

LEVI J. HAMMOND, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1886; at one time instructor in otology, University of Pennsylvania; past president of the Philadelphia County Medical Society; past chairman of the Section on Surgery of the Pennsylvania State Medical Society; past president of the Medicolegal Society of Philadelphia; at one time on the surgical staff of the Samaritan Hospital and the Philadelphia Dispensary; and for a number of years surgeon to the Methodist Episcopal Hospital; aged 68; January 6.

HENRY HAYNES KOONS, M.D., of Los Angeles, California; University of Pennsylvania, 1897; October 23, following an operation for duodenal ulcer; was born at New Columbus, Pa., 1867. In 1900 Dr. Koons first registered in California, but later went to southern Arizona to practice, returning to Los Angeles and opening an office in 1906. He continued the practice of internal medicine and surgery until 1924, when ill health caused his retirement. He was Lieutenant Surgeon of the 7th Pennsylvania Regiment during the World War; was active in medical research and still held his Major's commission; has been a member of the Association of Military Surgeons of the United States since 1917.

EDWIN TYLER DARBY, D.D.S., M.D., internationally known dentist, and emeritus professor of operative dentistry at the University of Pennsylvania, died of pneumonia at his home in Lansdowne, December 11, aged 85. Dr. Darby retired from practice in 1923, after sixty years of continuous service. In 1926 a campaign was launched for $200,000 to endow an Edwin Tyler Darby Chair of Operative Dentistry in the school of dentistry of the University of Pennsylvania, which sum has nearly been secured. In 1906 he was awarded the Jarvie Gold Medal by the New York Dental Society in recognition of his distinguished services to the science of dentistry.

Births

TO DR. AND MRS. DAVID STEIN, of Philadelphia, a son, January 18.

TO DR. AND MRS. FRANK G. RUNYEON, of Reading, twin girls, December 9.

TO DR. AND MRS. LEO WAGNER, of Lansdowne, a daughter, Betty, December 14.

Engagements

MISS DOROTHY BRAID and Mr. Carl A. Schaubel, son of Dr. and Mrs. Charles W. Schaubel, of Philadelphia.

MISS KATHARINE WHELEN, of Charlottesville, Va., and Dr. H. Miron Tracy, of Conshohocken and Philadelphia.

MISS PHEBE HANCE EBERHARD, daughter of Dr. and Mrs. Harry Martin, of Merion, and Mr. Wendell Brenneman Stewart, of Cynwyd.

MISS THEODORA AGNES LINN, of Cynwyd, and Mr. Nelson Carter Wilbur, son of Dr. and Mrs. Bertrand K. Wilbur, of Haverford.

MISS FLORENCE LEAS WOOD, daughter of Dr. and Mrs. Horatio C. Wood, Jr., and Mr. William Hacker, all of Philadelphia.

Marriages

MISS ETHEL JANE KUHN to Dr. Olin K. McGarrah, both of Altoona, December 9.

MISS NANCY NICHOLS PAGE, daughter of Dr. and Mrs. Henry F. Page, of Philadelphia, to Mr. Richard Mantle Fielding, January 21.

MISS ELIZABETH KENDIG, daughter of Dr. and Mrs. H. Evert Kendig, to Mr. Richard Wilson Churchman, all of Philadelphia, January 19.

MISS ELIZABETH HOPKINSON SHULL to Mr. George Ramsay Muller, son of Dr. and Mrs. George P. Muller, all of Philadelphia, January 18.

MISS MARION ARMSTRONG, daughter of Dr. and Mrs. James W. Armstrong, of Pottstown, to Lieut. Arthur W. Bass, U. S. N., of Overbrook, January 18.

MISS NELLIE SINCLAIR MCLEAN, daughter of Dr. and Mrs. John D. McLean, of Philadelphia, to George L. Snell, D.D.S., of Haddonfield, N. J., December 14.

MRS. CHRISTINE BIDDLE BOWIE, daughter of Dr. and Mrs. Williams Biddle Cadwalader, of Villanova, to Mr. Morgan Stephen Aiken Reichner, January 25.

MRS. MARY STOUT BLABON, daughter of Dr. George Clymer Stout, of Berwyn, to Lieut. William James Slattery, of the U. S. Naval Air Service, January 11.

MISS HARRIET ELY MARSHALL, daughter of Dr. and Mrs. George Morley Marshall, of Philadelphia, to Mr. Robert Seabury Wentworth, also of Philadelphia, February 8.

Miscellaneous

DR. AND MRS. ALEXANDER STERLING, of Philadelphia, returned January 18 from Europe.

DR. A. H. HILL, of Mifflinburg, was painfully injured in an automobile accident recently.

DR. SUE S. MOYER, of Pittsburgh, is now taking a postgraduate course at the Harvard Medical School.

A SMALLPOX EPIDEMIC occurred in January in Texarkana, Arkansas. Several hundred were reported stricken.

THE PRESBYTERIAN HOSPITAL, of Philadelphia, shares in the $1,172,000 estate of Mrs. Mary Ann Ross, of Charleston, S. C.

THE AMERICAN DENTAL ASSOCIATION announces the formation of a proposed council to deal with dental materia medica and therapeutics.

DR. CHARLES E. REMY has been appointed superintendent of the Montefiore Hospital, Pittsburgh, succeeding the late Dr. John D. Spelman.

DR. AND MRS. FREDERICK M. LAWRENCE, of Philadelphia, are spending the winter on the Riviera and the spring in Paris, returning to this country in June.

DR. GEORGE W. CRILE, noted surgeon and founder of the Cleveland Clinic, was the guest speaker at the January meeting of the Philadelphia County Medical Society.

AN ANONYMOUS GIFT of $100,000 was received in advance of the $1,500,000 building fund drive for the Frankford Hospital, Philadelphia, which was started January 27.

THE WILL OF JAMES WATSON, of Philadelphia, provides an endowment of $1,500 for the upkeep of a room in the maternity ward of the Women's Homeopathic Hospital.

DR. AND MRS. HOWARD FORD HANSELL and their granddaughter, Miss Wayne Hansell, after an eight-months' stay in Europe, have returned to their home at Philadelphia.

DR. HOWARD A. KELLY, of Baltimore, delivered the Macartney Lecture on "What I Believe About the Bible," in the Arch Street Presbyterian Church, Philadelphia, January 16.

DR. STEPHEN M. SMITH, formerly assistant medical director of the Philadelphia Hospital for Mental Diseases, is now associated with the Milwaukee Sanatorium, Wauwatosa, Wisconsin.

PLANS are nearing completion for the maternity hospital building to be erected for St. Agnes Hospital. The proposed structure will have three stories and a basement, and will cost about $400,000.

THE BRITISH MEDICAL JOURNAL reports that royal assent was received last June to incorporate a Royal College of Physicians and Surgeons of Canada. Toronto has been chosen as the headquarters of the college.

THE COLLEGE OF PHYSICIANS of Philadelphia owns a copy of the book on "Embryology," by the late Dr. Georges Clemenceau of France, with his personal autograph, which was sent to the late Dr. S. Weir Mitchell.

DR. DAVID RIESMAN has been elected president of the Medical Board of the Philadelphia General Hospital, succeeding Dr. Herman B. Allyn, who had served in this capacity for twenty-two years and who recently resigned.

DR. HARVEY M. GRIGGS, for thirty-six years a practicing physician of Philadelphia, has been sentenced to imprisonment for having performed illegal operations. Two nurses and five women testified, accusing him of malpractice.

AN AUTHORIZATION of $1,000,000 to construct the first unit of a proposed hospital to give free medical and surgical aid to crippled children in the United States is provided for in a bill introduced in the House on January 10.

THE WILLIAM POTTER MEMORIAL LECTURE was given by Edwin Grant Conklin, Henry Fairfield Osborn Professor of Biology, Princeton University, on the "Principles and Possibilities of Human Evolution," at the Jefferson Medical College, Philadelphia, January 23.

DR. FREDERICK S. BALDI, formerly visiting physician to the Moyamensing prison, has been appointed to the newly created position, Medical Director of City Prisons. Dr. R. Powers Wilkinson has been appointed visiting physician to Moyamensing prison.

DR. JOHN M. FISHER, associate professor of gynecology, Jefferson Medical College, Philadelphia, addressed the Atlantic County Medical Society, Atlantic City, N. J., on "Cancer of the Uterus—a Preventable Disease," on January 10, at the Hotel Chalfonte.

DURING 1928-29, the seventy-five recognized medical schools of the country enrolled 20,878 students and graduated 4,446. One in twenty was a woman. The United States has one sixteenth of the world's population and a quarter of the bona fide medical schools.

IT HAS BEEN ANNOUNCED that the Rockefeller Foundation will contribute about $12,000,000 to the famous Paris Medical School, France, which must be supplemented with French contributions. The new medical center will be erected in the "wine market" district of Paris.

DR. SOLOMON SOLIS-COHEN, Philadelphia, is the author of a book of poems of unusual merit, entitled *When Love Passed By and Other Verses*. Dr. Solis-Cohen is a Hebraic scholar with a profound reverence for the Hebrew poets of the Middle Ages. We extend our congratulations!

THE KENSINGTON BRANCH of the Philadelphia County Medical Society has disbanded. Its members will attend the meetings of the Frankford Branch. This is another instance of a county medical society's activity being eliminated by multiplicity of medical society meetings.

DR. HENRY W. SALUS, of Johnstown, has recently been included among the staff of writers for the Gorgas Memorial Institute at the request of its president, Dr. Cary T. Grayson. Dr. Salus's articles have already appeared in news columns throughout the nation by syndication.

FOUR LEPERS have just been released from the Federal leprosarium at Carville, La., bringing to sixty the number who have been cured of leprosy, according to reports by Surgeon General Hugh S. Cumming of the Public Health Service. Of all those released, only one has been forced to return.

A DEFINITE DECISION to erect a 150-bed tuberculosis hospital this year in Media has been reached, the structure of which will cost approximately $300,000. Completion of the new hospital will place Delaware County in the foremost ranks in the care of its tuberculous patients.

MR. WILMER KRUSEN GALLAGHER, aged 22, the son of Dr. Harry Gallagher, Chester, a student in the medical school of Temple University, Philadelphia, recently sustained a fractured femur by being struck by a skidding truck. He was taken to the Taylor Memorial Hospital, Ridley Park, where he remains under treatment.

DR. WILLIAM J. HARRISON, of Philadelphia, has been awarded the Corinna Borden Keen Scholarship for one year for the purpose of pursuing graduate work in ophthalmology under Dr. Ignicio Barraquer, of Barcelona, Spain. This memorial fellowship was established by Emeritus Professor W. W. Keen as a memorial to Mrs. Keen.

AT THE MEETING of the Physicians' Square Club, Philadelphia, held January 27, the following addresses were made: Dr. George H. Meeker, Dean of the Graduate School of Medicine, "Certain Phases of Current

Medical Practice"; and Dr. William N. Parkinson, Dean of the Temple University School of Medicine, "Present Tendencies in Undergraduate Medical Education."

DR. HERBERT H. DOW, Midland, Michigan, was the winner for 1929 of the Perkins Medal, one of the highest awards in chemistry, for "his development of improvements in the production of chlorine, magnesium, and numerous other chemical materials." Presentation of the medal was made January 10 at the Chemists' Club, New York City.

THE ONCOLOGIC HOSPITAL of Philadelphia, devoted solely to the care of cancer patients, is planning to construct several buildings, including one for x-ray and radium treatment, which will enable them to care for 2,500 patients a year, instead of the present limit of 500. The enlarged institution will be known as "the Cancer-Control Center of Philadelphia."

THE NEW OPERATING-ROOM suite given to the Methodist Episcopal Hospital, Philadelphia, by Mr. Charles J. Eisenlohr in memory of his father and mother, was dedicated on December 30. The suite contains operating rooms, with adjoining sterilizing and etherizing rooms, surgeons' dressing room, shower room, and offices. Dr. Joseph C. Doane was one of the speakers.

AN ELECTROSURGICAL DIVISION of the American Academy of Physical Therapy, headed by Dr. William L. Clark, of Philadelphia, was recently formed. The new division, Dr. Clark said, will be composed of surgeons from all parts of the country who are interested in the use of electricity for treatment of cancer and other diseases. The idea is to have a society in every community.

MR. JESSE GRIESEMER, for the past six years an assistant of the superintendent of the Allentown Hospital, has taken charge of the new Quakertown Community Hospital. It is intended to complete the hospital equipment to start with sixty beds. The new superintendent is a veteran of the World War and saw three and a half years of service over seas.

DR. W. W. KEEN, of Philadelphia, veteran of three wars, an honored member of medical and surgical societies through the world, celebrated his ninety-third birthday anniversary on January 20. Homage was paid by a family including four children, two sons-in-law, eleven of his thirteen grandchildren, three grandchildren-in-law, and ten great-grandchildren.

AFTER AN INTERVAL of nearly a hundred years, the Pennsylvania Hospital has again taken title to the properties at 723 to 735 Pine St., Philadelphia. Part of the original Pennsylvania Hospital property, the ground on which the houses stand, was disposed of when it was decided to erect the buildings of the institution on the present site. It is now planned to erect a home for nurses on the site.

THE PHILADELPHIA COLLEGE OF PHARMACY AND SCIENCE held a Pasteur Assembly in its auditorium, January 8. The address was delivered by Dr. Joseph McFarland, professor of pathology, University of Pennsylvania, and an oil portrait of Pasteur was presented by Dr. William Duffield Robinson, of Philadelphia, an alumnus of the school and a member of its board of trustees.

A MAN IN Philadelphia the early part of January consulted his attending physician for a cough, and was advised it was due to bronchitis. The man imbued with the idea that it was more serious, consulted a quack, who assured him it was due to tuberculosis. The man returned to his home and attempted suicide by shooting himself in addition to taking poison. The police are hunting for the quack.

DR. DANIEL J. MCCARTHY, professor of medical jurisprudence in the University of Pennsylvania School of Medicine, will have charge of the neurologic foundation at Temple University, which has been created for the study and treatment of nervous conditions. Associated in the management of the foundation will be Drs. Temple S. Fay and Nathaniel N. Winkleman. Public clinics in neurology will be conducted.

DR. W. A. SPROUT, of Scranton, brought suit in the Lackawanna County court to restrain the operation of a gasoline station adjoining his property. The court refused the injunction. The case was appealed to the Pennsylvania Supreme Court. The Supreme Court sitting in Philadelphia in January sustained the lower court, because the doctor did not bring the injunction suit against the owners of the gas station until five years after it had been constructed.

IN THE WILL of the late Dr. Philip H. Moore, of Philadelphia, the Methodist Hospital, Bowdoin College, and the Jefferson Medical College are named to share the principal of the residuary estate, which will amount to about $53,000, upon the death of the survivor of three trust beneficiaries. The Methodist Hospital received $10,000 outright. Drs. John G. Taylor and B. H. Mann are given $1,000 each, and are to share the testator's professional equipment.

THE NEW SCHOOL FOR SOCIAL RESEARCH, at 465 West 23d Street, New York, announces a course of eight lecture and discussion periods on psychoneuroses, to be held on Fridays, from five to seven o'clock, beginning January 24, with admission open to physicians only. Fritz Wittels, M.D., of Vienna, who has been associated with Freud, since 1904, as a student of problems of psychoanalysis, and who has achieved great distinction as an author and practitioner, will conduct this course.

EXPORTS OF American drugs, pharmaceuticals, and proprietary medicines during the current year will surpass all previous records, the Chemical Division of the Bureau of Foreign and Domestic Commerce has announced. For ten months of 1929 the totals, not including those for noncontiguous territory, were $18,094,899 against $16,925,121 for the same period of 1928. Exports of antitoxin, serums, vaccines, and other biologicals were alone valued at $2,753,000, a gain of $621,000 over 1928.

THE STATE DEPARTMENT OF AGRICULTURE maintains a laboratory where heads of animals are examined for rabies, free of charge. Any one desiring the examination made should send the entire head of the animal, packed on ice so that it will be ice cold when received, to the Laboratory of the Bureau of Animal Industry, Post Office Box 403, Harrisburg, Pa. The head must be fresh, as an animal that has been killed for some days cannot be examined on account of the rapid decomposition of the brain.

AT THE ANNUAL MEETING of the Medical Club of Philadelphia, held January 17, the following officers were elected for 1930: president, Dr. John M. Fisher; first vice-president, Dr. Alexander MacAlister, Camden, N. J.; second vice-president, Dr. George H. Cross, Chester; secretary, Dr. W. S. Wray; treasurer, Dr. George A. Knowles; governor, Dr. George C. Yeager; additional directors, Drs. R. P. Wilkinson, Samuel Moss, Edgar S. Buyers, George M. Boyd, and Jay F. Schamberg.

THAT OFFICERS AND ENLISTED MEN of the National Guard may provide themselves with the blue dress uniform, the wearing of which by all components of the Army was recently permitted but not required, the Acting Secretary of War, Colonel Patrick J. Hurley, has authorized the members of the National Guard to purchase these uniforms from the Quartermaster Corps. He has further authorized the purchase of the uniforms from private funds or funds other than Federal, when the wearing of the uniforms has the approval of the state authorities.

WHILE FIRE raged for a quarter of an hour in the "star" room of the inclosed roof atop the Graduate Hospital, Philadelphia, the nurses and other attendants in the institution went about their duties so calmly that patients were unaware of the blaze. The bells of the

fire engines were muffled as they neared the hospital. Quick action of the fire captain averted a panic in the institution, for had relatives or friends of patients got inside and spread the alarm the efforts of the nurses and attendants probably would have been in vain. The fire was confined in the one room.

THE *Survey Graphic* has devoted its January, 1930, number to the discussion of "Adequate Medcial Care for Every Man" and "How Shall the Doctor be Paid?" Complimentary copies have been sent to physicians by the publishers, but we do not know how extensive this list was. The number is intensely interesting to the medical profession, and every physician should have a copy. If any of our readers have not seen a copy of the issue referred to, it would be well worth while to forward a request to the publishers, 112 E. 19th Street, New York City, enclosing thirty cents to cover the subscription price for the number.

JIM LONDOS, pride of the Greeks, who aspires to be the world's champion wrestler, has an interesting philosophy of life. In a recent interview in Philadelphia, he stated: "A wrestler usually feels the end coming around 45. It is indeed too bad that his muscles then will not respond, for at that age he knows far more about the science of the game than he does at 25. That is the sad part of our sport. A physician is in his prime at 50 and is able to give to the world the benefit of his background, his past years of experience. A wrestler wants to show the world the results of his knowledge, but he cannot at that age. His muscles will not respond."

TWO HUNDRED AND FIFTY doctors from all parts of Europe visited Budapest to take part in the Congress of the International Society of Medical Hydrology and the International League Against Rheumatism. Rheumatism is now widely recognized to be even a commoner form of disablement than tuberculosis (it is stated that every sixth person in Britain is rheumatic, and every eleventh person in Germany and Hungary). It is probable that in the future Budapest will develop into the principal European center for its cure. Owing to the number of thermal springs in the city, the cult of the healing bath has reached a point there which is said to have been unsurpassed since Roman times.

AN ANNUAL PRIZE of $10,000 and a medal has been established by *Popular Science Monthly* to be awarded beginning this fall under the auspices of the Popular Science Institute to the American citizen who, during the preceding year, has been responsible for the scientific achievement of greatest potential value to the world. The first prize will be conferred in September by a committee of twenty-four scientists representing institutions throughout the United States. All scientific workers, professional and amateur, academic, and commercial, are eligible for the prize. The award was created to stimulate research especially along practical lines.

ANNOUNCEMENT HAS BEEN MADE of the personnel of the new Schuylkill Valley Board, authorized by a group of business and civic organizations to work for purification of the Schuylkill river. In addition to Philadelphia, eight towns along the Schuylkill are represented. The Schuylkill Valley Board will endeavor to induce various communities and industries along the river to accept their share of the responsibility. It will try to avoid punitive measures of any kind, but rather to work in close conjunction with manufacturers, municipal authorities, and real-estate interests, to restore the stream to its pristine beauty, adding to the value of its banks, and making it an asset rather than a liability. Dr. Howard S. Anders, Philadelphia, is on the Board.

ACCORDING to an Associated Press dispatch Senator John A. Hastings, of Brooklyn, N. Y., announced that he proposes to introduce an amendment to the State Medical Practice Act permitting to licensed physicians "the use of spirituous and vinous liquors, as medicines, for the cure and alleviation of illness without limitation as to quantity, or restriction as to time, any state law, local ordinance, or Federal statute to the contrary not withstanding." The Federal statute limiting a physician to the prescription of not more than one pint of spirituous liquors in ten days to a patient constitutes, he said, "a grave and serious invasion into, and a violation of the sovereign power of the State of New York to regulate the practice of medicine within its territorial confines."

NINETEEN new Government hospitals and 4,491 additional beds for the treatment of war veterans are authorized by a bill signed by President Hoover in December, which appropriates $15,950,000 for this purpose. The President has appointed a commission to consider the coördination of different governmental agencies engaged in hospitalization, and to determine the policies which should be pursued. This idea is a thought as to the future, as the newly authorized expenditures will bring the outlay for the construction of hospitals to $105,000,000. The care of each patient costs about $3.50 a day. There are now about 19,000 patients in Government hospitals. Upon the completion of the new units 26,000 beds will be available, which will afford the liberal policy of admitting veterans whether or not their ailments are traceable to war duties.

DR. A. A. CAIRNS, director of health, Philadelphia, in submitting his annual report to the Mayor, stresses the success of the city's campaign against diphtheria. In 1929 there were but 928 cases reported, and of these 89, or less than 10 per cent, proved fatal. In thus placing the city at the head of all others in reducing the ratio of deaths from diphtheria to 4.25 in the 100,000 of population, there is a reduction from 11.2 in the 100,000 of population the previous year. This most gratifying result is attributed to the coöperation of the Board of Education and the Department of Health, in giving with parental consent the Schick test and immunization. Philadelphia's leadership among American cities in this life-saving work is a distinction which reflects the highest credit upon its health authorities and its medical profession.

DR. H. R. M. LANDIS, of Philadelphia, was reëlected president of the Pennsylvania Tuberculosis Conference as the organization closed its thirty-eighth annual session at Erie, January 15. Other officers are: Rolin S. Knapp, Easton, and Dr. C. Howard Marcy, Pittsburgh, vice-presidents; Dr. Ward Brinton, Philadelphia, secretary; J. William Hardt, Philadelphia, treasurer; Thomas Raeburn White, Philadelphia, solicitor. Four new directors elected for two-year terms are: Dr. M. G. Brumbaugh, president of Juniata College, Huntingdon; John M. Groff, Lancaster; Dr. J. R. Durham, president of the Warren County Tuberculosis Society, Warren; and D. Edward Long, newspaper publisher of Chambersburg. Extension of the work of preventing tuberculosis among children, including 180 clinics held in remote sections last year, was reported by Arthur M. Dewees, executive secretary.

CONRAD HUBERT, the inventor of the pocket flash light and other electrical devices, died at Cannes, France, February 14, 1928. He directed in his will that three prominent citizens be appointed to determine the institutions and the amount to which three quarters of his fortune should be distributed. Thirty-three institutions were selected by them to receive approximately $6,000,000. Calvin Coolidge, Alfred E. Smith, and Julius Rosenwald constitute the committee. Among those selected are Provident Hospital, Chicago, $500,000. This selection was made and amount given "to be used to train young negroes to be physicians. This will have a far-reaching effect down through the ages." Howard University, Washington, D. C., $200,000 toward building a medical school. These were the only selections pertaining directly to medical education, and no doubt the committee thoroughly discussed the increasingly difficult problem of medical education of the negro. In every instance the gift is accompanied by "an urgent

request" that the beneficiary raise an equal or greater sum immediately, to go to the same purpose.

SINCE THE RECENT announcement of the resignation of Dr. Chevalier Jackson from the faculty of Jefferson Medical College, his resignation from the faculty of the University of Pennsylvania Graduate School of Medicine has been announced. Dr. Jackson will devote himself to the development of the bronchoscopic clinic at Samaritan Hospital and to his professorship at Temple University School of Medicine. Both resignations become effective next June. He will continue, however, as William Potter Memorial lecturer at Jefferson, that appointment having been for life when established two years ago. The bronchoscopic clinic at Jefferson is to be directed by Dr. Louis H. Clerf and Dr. Edmon Auccin, until recently of Paris, and the bronchoscopic clinic at the University of Pennsylvania by Dr. Gabriel Tucker. The bronchoscopic clinic at the Samaritan Hospital is fully equipped. Dr. Jackson will be assisted by his son, Dr. Chevalier L. Jackson, who will be clinical professor of bronchoscopy and esophagoscopy, and by Dr. Emily L. Van Loon, who will be chief of the clinic.

A PLEA FOR CLOSER ASSOCIATION between dentistry and the medical profession in combating diseases arising from focal infection was made at the twentieth anniversary of the North Philadelphia Association of Dental Surgeons, held January 8. Dr. Earle C. Rice, an oral surgeon, describing the advancement of the profession of dentistry within recent years, especially with reference to the cure and prevention of focal infections, said, "Dentistry has found its place in the sun. It is indeed one of the specialties of medicine, and the time has come when there must be a candid coöperation bewteen the dentist and the physician, the better to combat the ravage of infection." Dr. Judson Daland states, "The dentist, in making an examination of teeth, should realize the need for greater attention to the possibility of focal infection. All devitalized teeth in people suffering from focal infection should be removed." Dr. G. Oram Ring pointed out the relation between the teeth and the eye, and the consideration that should be given to the teeth as a source of focal infection causing trouble with the eye.

THE AMERICAN JEWISH PHYSICIANS' COMMITTEE, 106 East 85th Street, New York City, was organized in 1921 for the purpose of building a medical school and University Hospital in Palestine, as a part of the Hebrew University. Since then land has been purchased on Mount Scopus and in Jerusalem proper as sites for the school and hospital; a microbiologic institute is being maintained; each year $10,000 is being contributed to the institute of chemistry; an efficient medical school library is being supported; and, together with the Hadassah, money is being raised for the erection of the University Hospital. To maintain institutions already started, and to continue the work for the medical department of the University, the sum of $80,000 is needed this year for the American Jewish Physicians' Committee, who are appealing only to professional men and women for contributions. The following Pennsylvania physicians are on the advisory board: Drs. Aaron Brav, S. Solis-Cohen, and David Riesman of Philadelphia, and Dr. Albert Kaufman, Wilkes-Barre.

MENTAL HYGIENE WORKERS throughout Pennsylvania were shocked at the report of the death of Dr. Floyd C. Haviland of New York, at Cairo, Egypt, from pneumonia. As a token of appreciation of Dr. Haviland's contact with them, these lines are sponsored by the Mental Hygiene Committee of the State Medical Society:

Although many years have passed since we first met Dr. Haviland, as a representative of the Public Charities Association to make a survey of Pennsylvania's hospitals and homes for the mentally ill, he kept afresh a personal relationship with Pennsylvania men, a relationship which always reflected a keen understanding of the responsibilities of the heads of these institutions and the splendid work they were doing under adverse circumstances. This was particularly manifested by personal greetings and due recognition given to them in programs and scientific committees of state and national bodies with which he was connected. In other places of his greatest achievements, Dr. Haviland's accomplishments will be given in full. As Pennsylvanians we wish to verify to those broader contacts outside his own state and which endeared him to the country at large. We shall always remember his personality as one of dignity, knowledge, understanding, firmness, courtesy, and consideration.

THE MEDICAL SOCIETY of the State of New York is again very active with a session of their State Legislature. No one knows just what this means excepting those who are intimately associated with this kind of activity. A number of bills that were considered last year and defeated have already found their way into the Legislature this year. Of general medical interest may be mentioned the following: Making all disabling diseases and illnesses compensable under the Workmen's Compensation Law; amending the Workmen's Compensation Law by providing compensation for all diseases arising out of employment—this is a very far-reaching bill, because it would make every employer, under whom the workman might have been employed, liable for a share in the compensation allowed the employee, if he dies or becomes permanently disabled because of a disease arising out of the employment, unless the earlier employers can prove that the employee was well when he left them; a health insurance bill very much enlarged over last year, and adding to it sections on old-age pension and maternity benefits; a chiropractic bill; an amendment to the new public welfare law, providing that a patient whose care is to be a charge on a public welfare district shall be cared for in a hospital located in the city, town, or village where patient resides; reintroduction of bill for sexual sterilization of the insane.

FOR SEVERAL YEARS PAST Major General M. W. Ireland, Surgeon General of the Army, has shown the need for a greater number of officers to meet the demands of the Medical Service of the Army. In his annual report for the fiscal year ending June 30, 1929, he says:

There were seventy-seven vacancies in the Medical Corps at the close of the fiscal year, as compared with fifty-one at the close of the previous year. The reason for the resignation of officers is not dissatisfaction with the service, but is the fact that from a financial standpoint they are able to do much better in civil life. During the latter part of the year it was found necessary to adopt the policy of not favorably considering the resignation of younger officers until they have made some return to the Government for the instruction and training given them in general hospitals and in the Medical Service schools. An increase in the pay for officers of the Medical Corps is the only thing which will prevent resignations from continuing on a large scale.

A bill for the relief of the medical department was introduced in the last Congress, but no action was taken. Legislative action looking to an increase in the number of officers for the branches of the medical department is imperative, if the desired high standard of medical service is to be maintained.

THE FOLLOWING PENNSYLVANIA RESERVE OFFICERS, having accepted reappointment in the Officers' Reserve Corps without the privilege of active duty or assignment, have been relieved from assignment to units of the Organized Reserves: From Philadelphia, Capt. Philip A. Trau, Capt. Arthur E. S. Casey, Major Carlton N. Russell, Major Baxter L. Crawford, Capt. Frederick E. Keller; Capt. William A. Cave from Bellevue, Major LeRoy Umburn from Albion; First Lieut. Sophronous A. McCutcheon from Bradford;

(Continued on page xviii.)

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MEDICAL NEWS

(Continued from page 364.)

Capt. Russell C. Lichtenfels from Pitcairn; and Capt. John W. Horn from Hummelstown.

The following Reserve Officers having been placed on the Emergency Officers' Retired List have been relieved from assignment to units of the Organized Reserves: Lieut. Col. Thomson Edwards from Drexel Hill, Lieut. Col. Thomas W. Penrose from Philadelphia, Capt. Robert Goodman from Benton, Capt. Valentine B. Eiler from Titusville, and Capt. Wm. E. Gardner from Pittsburgh.

The following Medical Reserve Officers having been transferred to the Auxiliary Reserve have been relieved from assignment to units of the Organized Reserves: Major Benj. R. Kohler from Reedsville, Lieut. Col. Henry R. Brown from Aspinwall, and Capt. Geo. S. Milnes from Rushville.

First Lieut. Howard C. Thompson, Philadelphia, having been federally recognized as a First Lieut., M.C., Pa., N.G., has been relieved from assignment to the 32d Evacuation Hospital.

Lieut. Col. Raymond R. Decker, Lewistown, has been relieved from assignment to the 1st Evacuation Hospital and assigned to the 48th Station Hospital as Commanding Officer.

Lieut. Col. Roscoe L. Perkins, Harrisburg, has been assigned to the 8th Surgical Hospital as Commanding Officer.

Major Wm. C. Keller, Upper Darby, has been relieved from assignment to the 343d Medical Regiment and has been assigned to the 304th Observation Squadron.

THE MENTAL HYGIENE COMMITTEE of the State Medical Society, in order to give full coöperation to each component county medical society and each chapter of the Woman's Auxiliary in promoting one Mental Hygiene Day meeting before each body during the ensuing year, has, with the approval of the president, Dr. W. T. Sharpless, and Dr. H. W. Mitchell, chairman of the Board of Trustees, augmented and organized its membership as follows: Committee.—Drs. J. Allen Jackson, *Chairman*, Danville; LeRoy M. A. Maeder, Philadelphia; H. C. Wholey, Pittsburgh.

Eastern Section.—Drs. LeRoy M. A. Maeder, *Chairman*, Philadelphia; Everett S. Barr, Philadelphia; W. G. Bowers, Schuylkill Haven; Albert C. Buckley, Philadelphia; Michael A. Burns, Philadelphia; Harry F. Hoffman, Allentown; Baldwin L. Keyes, Philadelphia; Henry I. Klopp, Allentown; Frederic H. Leavitt, Philadelphia; Clarence A. Patten, Philadelphia; Albert Super, Pennhurst; E. A. Whitney, Elwyn; George Wilson, Philadelphia; Joseph C. Yaskin, Philadelphia.

Western Section.—Drs. H. C. Wholey, *Chairman*, Pittsburgh; Charles Koenig, Pittsburgh; C. H. Henninger, Pittsburgh; George J. Wright, Pittsburgh; W. H. Mayer, Pittsburgh; G. M. Smeltz, Pittsburgh; Theodore Diller, Pittsburgh; T. M. Barrett, Pittsburgh; J. S. Hammers, Mayview; G. S. Lewellyn, Mayview; H. W. Mitchell, Warren; I. A. Darling, Warren; H. K. Petry, Warren; Harvey Watkins, Polk; C. R. McKinnis, Torrance; G. A. McCraken, Woodville; T. M. T. McKennan, Pittsburgh; E. Bosworth McCready, Pittsburgh; W. W. Richardson, Mercer; Charles Ley, Pittsburgh.

Central Section.—Drs. J. Allen Jackson, *Chairman*, Danville; G. F. Willey, Harrisburg; William C. Sandy, Harrisburg; C. A. Marsh, Selinsgrove; Mary Wolfe, Laurelton; E. M. Green, Harrisburg; H. V. Pike, Danville; T. A. Rutherford, Clark Summit; George T. Basket, Retreat; B. E. Miller, Harrisburg; George B. M. Free, Danville; Charles A. Zeller, Danville.

Chairmen of all program committees, secretaries, or presidents interested in promoting a Mental Hygiene Day in their respective groups, will please communicate

(Concluded on page xx.)

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MEDICAL NEWS

(Concluded from page xviii.)

with Dr. J. Allen Jackson, Danville, Pa., who will refer the requests to the respective sections for arrangement of programs, as well as speakers.

BOOK REVIEWS

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

THE VOLUME OF THE BLOOD AND PLASMA IN HEALTH AND DISEASE. By Leonard G. Rowntree, M.D., and George E. Brown, M.D., Division of Medicine, The Mayo Clinic and The Mayo Foundation, Rochester, Minnesota, with the technical assistance of Grace M. Roth. 12mo, 219 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1929. Cloth, $3 net.

This work constitutes a study of the volume and concentration of the blood and not specially its content. The thesis is presented in three questions as follows: Is an increase in the blood mass, with overfilling of the vascular system, in any way responsible for hypertension? Is the large heart frequently seen in pernicious anemia caused by large blood volume? Is the large heart sometimes seen in myocardial insufficiency (unassociated with hypertension or nephritis) produced by an increase in blood mass? The answers to these questions are rationally presented and are worthy of serious consideration by clinicians and laboratory workers.

We feel convinced that this new angle of blood study will be provocative of investigation by clinicians and laboratory workers with resulting clarification of many subjects and questions that have thus far remained unanswered. A satisfactory bibliography is attached.

THE SURGICAL CLINICS OF NORTH AMERICA. Volume 9, number 6. (Lahey Clinic Number—December, 1929). 188 pages, with 51 illustrations and complete Index to Volume 9. Per Clinic year, paper, $12; cloth, $16. Philadelphia and London: W. B. Saunders Company.

This volume by Dr. Lahey and his associates is a very comprehensive review of some of the operations performed on their patients. Much of the book is devoted to a consideration of the thyroid gland, its diseases, the operations, and the anatomy of the gland. When one has had the experience of 7,500 goiter cases, the opinions and deductions expressed should be accepted with the highest regard. As a matter of fact all the statements based on the anatomic and surgical aspects of this subject are instructive, authoritative, radical, and still conservative. Again, after one has visited the Lahey Clinic, one appreciates still more the clarity of the subject.

In all organized clinics the anesthetist is no small factor to its success. Special attention is called to the papers by Dr. Sise. He is the doctor anesthetist, with added refinements, of former days. This is a specialty much neglected by doctors at present on account of the invasion of the nurse anesthetist with limited knowledge and qualifications. This volume is of inestimable value to all surgeons.

ON MAKING MISTAKES

There come to all editors—certainly to all editors who have not grown calloused—moments of wonderment if what they write or what they gather from other writers is read and, if so, by how many.

To the editor who is suffering from that form of depression there is no better antidote than to make one first-rate, egregious blunder—a blunder which no one

(Concluded on page xxii.)

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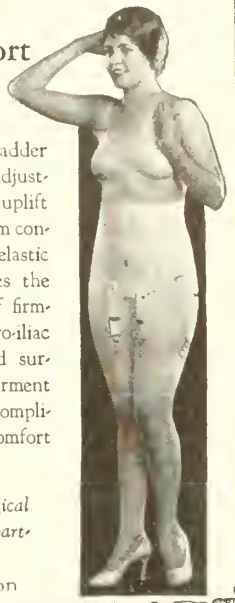

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ON MAKING MISTAKES

(Concluded from page xx.)

should have made and no one can explain. By the time he's ceased hearing from those who have caught his error and are prepared to rebuke him in private and if need be to pillory him in public, he will realize that his publication is read.

How do we know? Because on this page in November we took that flier of the seas, the *Bremen*, from its rightful owner, the North German Lloyd, and wrote "the *Bremen* of the Hamburg-American Line."

The November issue was not long in the mails when the first protest was received, an anonymous one, merely a clipping with the error outlined by a red lead pencil. Then other protests, more formal, came and mid-December has not ended them. To all who noticed and wrote and to all who noticed and didn't write, we bow a shamed head and plead guilty. And we have no alibi, unless we find it in the remark attributed to Larry Doyle, second baseman on some of John McGraw's best teams. Mr. Doyle made an error, a good resounding, soul-satisfying error, one which not only cost a game but the world series. As Larry met his lugubrious manager a moment later in the dressing room, he beat him to it by exclaiming: "Well, you got to hand it to me, John, I pull 'em where they count."—*Nation's Business.*

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Diabetes[*]

ESSENTIALS FOR THE DIAGNOSIS OF DIABETES MELLITUS[†]

LEON JONAS, M.D.
PHILADELPHIA, PA.

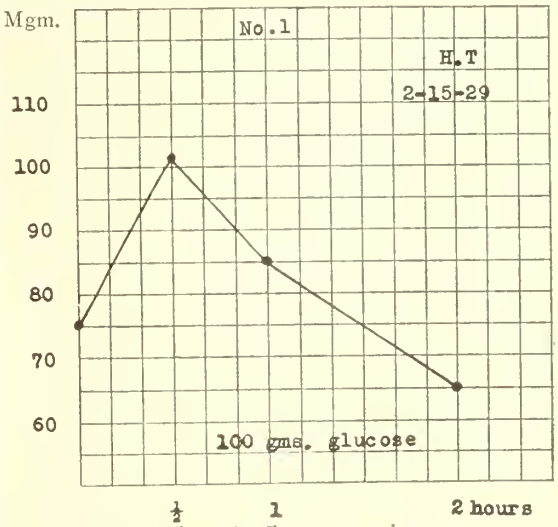
The following remarks attempt to specify the diagnostic criteria of diabetes mellitus and elucidate the use of blood sugar figures. Diabetes is a constitutional disease involving the metabolism of carbohydrates and, secondarily, of fats.

The diagnosis of a frank case of diabetes is not difficult, and is made on finding the familiar subjective and objective symptoms of this disease. The history of weakness, loss of weight, together with nocturia, thirst, and excessive appetite, always warrants the suspicion of diabetes. The loss of sex power, furunculosis, a carbuncle, gangrene, pruritus, neuritic pains, the development of cataracts and retinitis, are often secondary to diabetes. In children one frequently elicits the history that the child has begun to wet the bed and to drink large quantities of water. Often there is a history that in spite of a ravenous appetite the child loses weight. Frequently the parents will notice that the child has become irritable and listless.

The two cardinal objective symptoms are glycosuria and hyperglycemia. In the normal individual the ability to burn and store glucose is so great that any amount ingested can be taken care of without causing either a hyperglycemia or a glycosuria. In diabetes this function is impaired, because, in general, of a deficit in insulin production in the pancreas. This causes an accumulation of an excessive amount of glucose in the blood, which in turn overflows into the urine.

As a rule definite subjective symptoms, with a glycosuria, suggest diabetes. The diagnosis of diabetes, however, should not be made wholly on a positive test for glycosuria, because many positive cases are nondiabetic. This is particularly so with cases discovered during life insurance examinations, and during routine examinations for other conditions. Holst,[1] in following up one hundred and eighty-nine cases rejected by the Danish Life Insurance Association because of glycosuria, found that only thirty per cent were diabetic. The remaining seventy per cent fell into the group of benign or nondiabetic glycosurias.

Benign glycosuria is a condition in which sugar is found in the urine with a normal fasting blood sugar. It can be divided into renal glycosuria, and the so-called alimentary glycosuria. Cases of renal glycosuria may be subdivided into two groups. In one, the urine is never free of sugar, and the amount of sugar is uninfluenced by diet; in the other, sugar appears periodically. The fasting blood sugar and the blood-sugar curves are normal. In the periodic type the sugar appears only after taking carbohydrates because the threshold is higher than the fasting level, but considerably below the normal

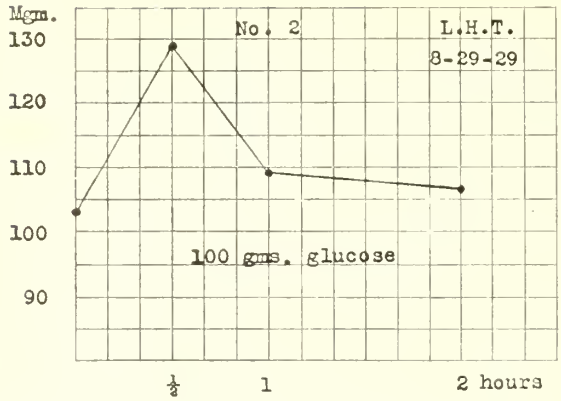


Curve 1. From a normal person.

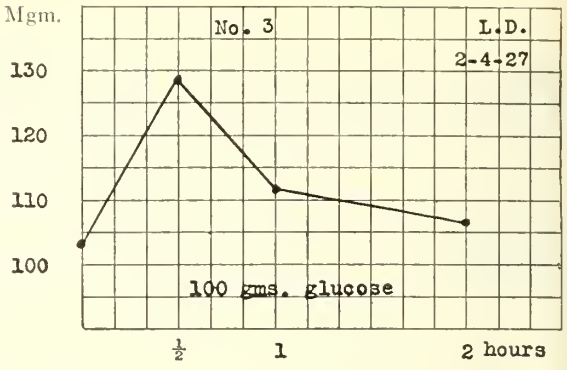
threshold. The threshold is that level of blood sugar above which sugar appears in the urine. In a normal individual this level usually is between 160 and 170 mg. per 100 c.c. of blood. In alimentary glycosuria, the fasting level and the threshold are at the normal levels, but the peak of the curve rises above the threshold.

[*] Read before the Section on Medicine of the Medical Society of the State of Pennsylvania, Erie Session, October 2, 1929.

[†] From the William Pepper Laboratory of Clinical Medicine, University of Pennsylvania.



Curve 2. From a patient with renal glycosuria. The urine is never free of sugar and this is uninfluenced by diet.



Curve 3. From a patient with periodic renal glycosuria. Sugar appeared in the urine only after taking carbohydrates.

It is important to differentiate diabetes from benign glycosuria, because of the difference in the prognosis, management, and economic outlook. The one is a definite disease, while the other is an anomaly apparently of no significance. Apparently very few, if any, cases of benign glycosuria have become diabetic.

The study of the respiratory quotients of patients with benign glycosuria after taking glucose has shown no impairment of their carbohydrate metabolism.

The differential diagnosis is often difficult in very mild cases. A strong family history of diabetes should favor diabetes, but cases of benign glycosuria have been found in families with a marked diabetic history.

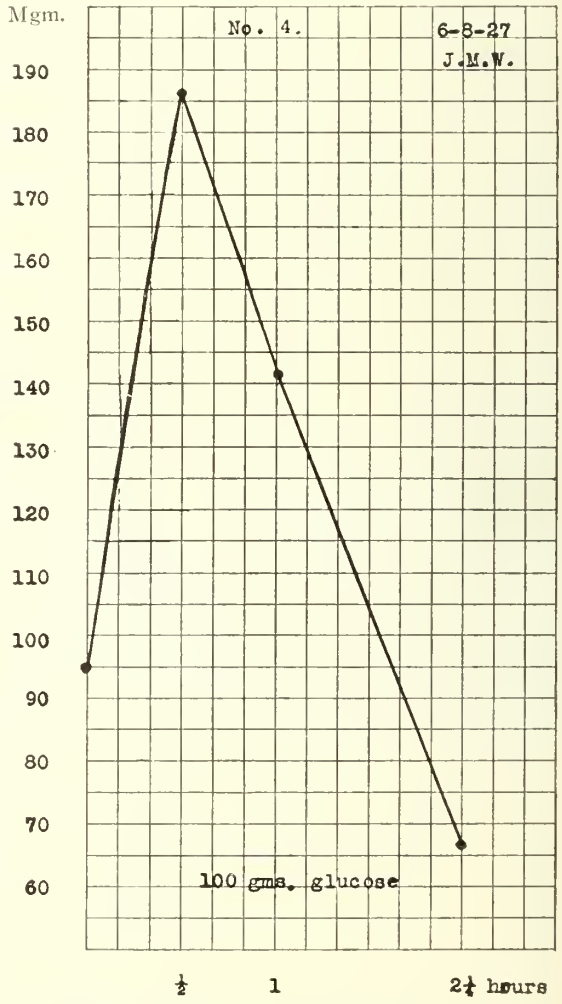
As a rule cases of benign glycosuria are free of subjective symptoms, but there are cases of benign glycosuria with symptoms of diabetes. There are cases of diabetes, too, that are free of subjective symptoms. Usually cases of diabetes that have been untreated have a fasting blood above the normal maximum. On the other hand there are cases of diabetes with a normal fasting level. Probably the most applicable test for differentiating diabetes from nondiabetic glycosuria is the sugar tolerance test.

The blood-sugar curves in our cases were determined by studying the blood sugar on fasting, and again at the end of a half hour, one hour, and two hours after the ingestion of 100 grams of glucose.

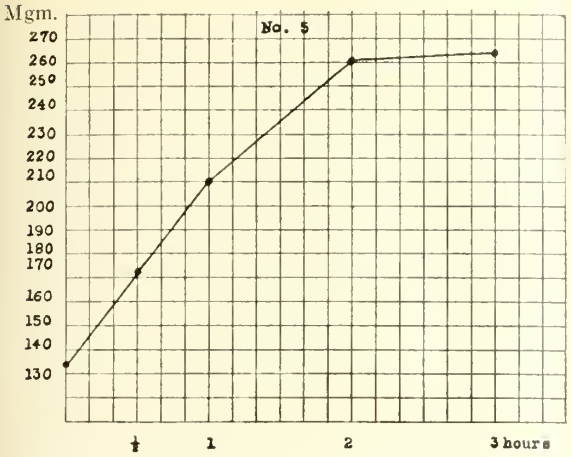
In a normal individual the fasting level is between 80 mg. and 120 mg. per 100 c.c. of blood. After taking the glucose it rises to a level between 140 and 180 mg. within the first hour, and then so rapidly falls that at the end of two hours it is at or below the fasting level.

In an untreated case of diabetes the fasting level is usually above normal, and the blood-sugar curve following the ingested glucose rises to a level much higher than normal, and is so sustained that the fasting level may not be reached again for four to six hours.

The different types are illustrated by curves, numbers 1 to 8. All received 100 grams of glucose except number 8 where 50 grams were

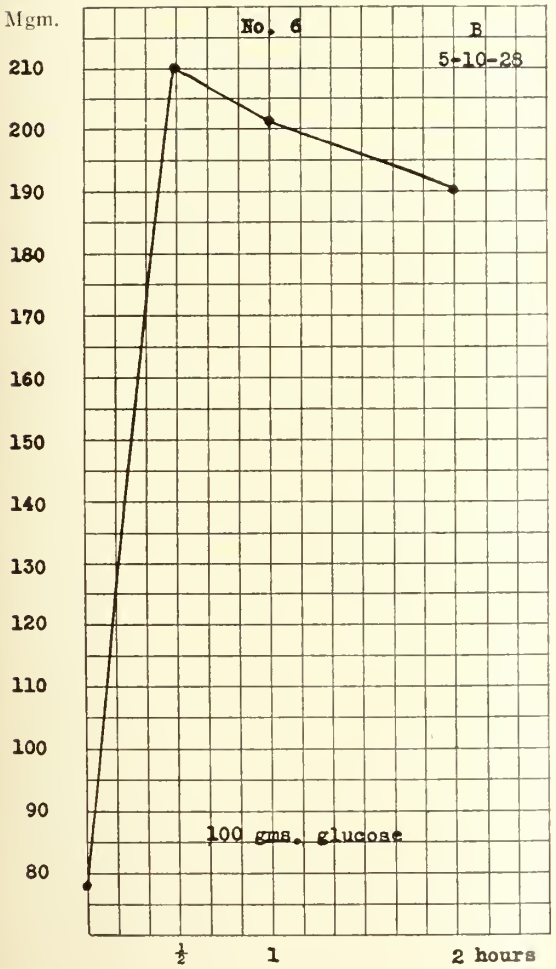


Curve 4. Representing a case of alimentary glycosuria. The glycosuria appeared after the blood sugar rose above the threshold.



Curve 5. Typical diabetic curve the fasting level is above normal, the peak is high and sustained, and the return to the fasting level is much delayed.

given. In the first seven curves the blood for examination was removed from the vein at the elbow.

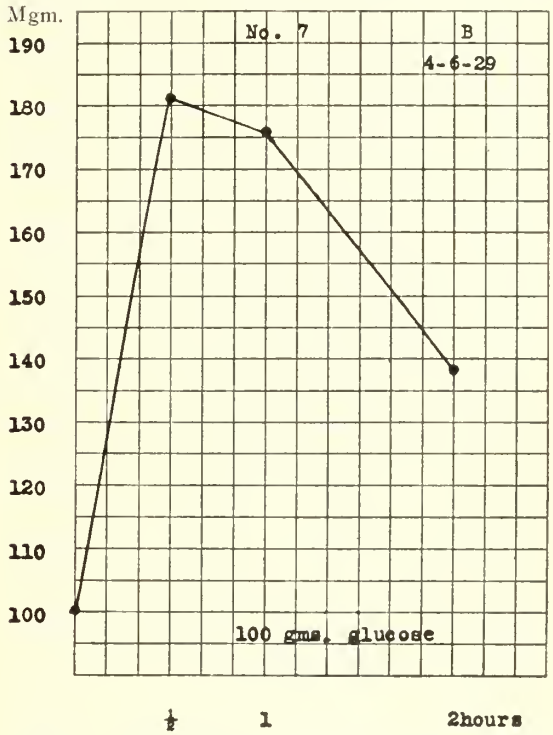


Curve 6. Representing a diabetic patient who has a normal fasting level, but whose curve fails to return to normal after two hours.

The cardinal points of the first four curves are that the fasting levels are normal and that in the first three the peaks are below the normal threshold, and in the fourth it is above the threshold. The four curves have returned to the fasting level, or below it, at the end of the second hour.

In interpreting a curve one must consider the fasting level, the peak, and the time required for it to return to the fasting level. A normal fasting blood sugar, as a rule, is not found in untreated cases of diabetes.

The significance of the peak is still unsettled. It is believed by some that a rise above 180 mg. favors diabetes. On the other hand it is the



Curve 7. From the same case one year after being on dietetic treatment. It will be observed that the fall in the curve is more rapid.

belief of others that this is not necessarily so. They believe that the high peak is due to a delay in the response of the glycogen-forming mechanism. When once active, however, it rapidly lowers the blood sugar. There are many who believe that the rapidity of return of the blood sugar to a normal fasting level is the important feature of any curve. It seems logical because it is an index of the efficiency of the glucose-disposing mechanism. There is at least one large life insurance company in this country that will accept as a normal risk a case of glycosuria, provided the blood sugar is within the normal fasting range two hours after taking 100 grams of glucose by mouth.

The correct interpretation of blood-sugar values and their importance as a diagnostic aid will come only after many cases have been followed a number of years. In the meantime the safest procedure is to make periodic examinations of these patients.

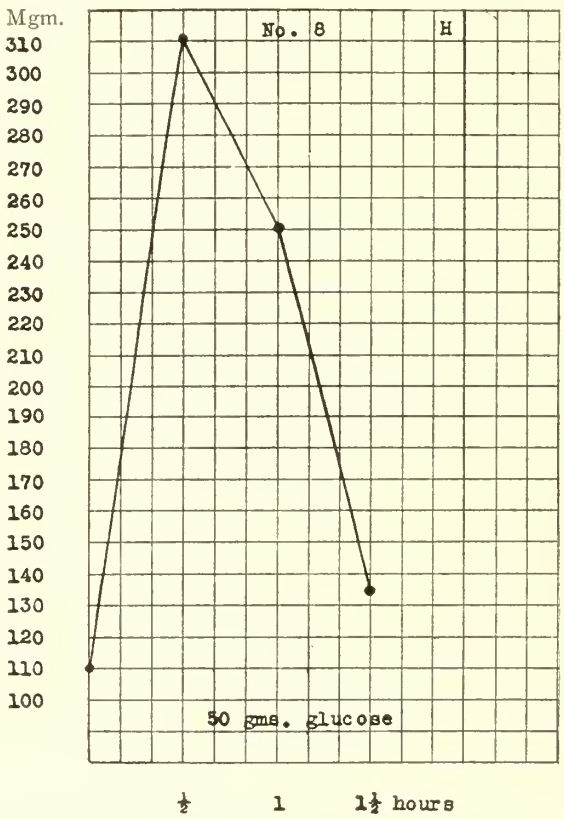
SUMMARY

(1) Glycosuria alone is inadequate for a diagnosis of diabetes, as there are many individuals who have sugar in the urine and are not diabetic.

(2) There is no single symptom, either subjective or objective, on which the diagnosis of diabetes can be made, with the possible exception of a hyperglycemia after fasting from eight to twelve hours.

(3) The sugar tolerance test is the best readily available method for differentiating diabetes and benign glycosuria.

(4) Blood sugar within the normal fasting range two hours after taking 100 grams of glucose in untreated cases in general is evidence that the patient has not diabetes.



Curve 8. A treated case of diabetes from Holst[1] after taking 50 grams of glucose. It is interesting because of the normal fasting level, the very high peak, and the rapid return towards the fasting level.

University of Pennsylvania.

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1. Holst.—*Acta med. Scandinav.*, 1925, 63: 47.

COMPLICATIONS OF DIABETES

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There are complications *in* diabetes and complications *of* diabetes. The problems of the former, because of the efficiency of insulin, become chiefly those of the complicating disorder. This is especially true of surgical conditions. Complications *of* diabetes are avoidable and unavoidable. Most of the avoidable ones, if recognized in time, may be satisfactorily treated. The unavoidable complications of diabetes are always serious.

Any disorder may be a complication *in* diabetes. These patients may contract chronic or acute infections. Syphilis and diabetes occur together, somewhat more rarely, however, than might be expected. Possibly because in the past the duration of the life of diabetics was relatively short, the late manifestations of syphilis in them were infrequent. It is usually not a serious complication. Indeed, I am often relieved to find a positive Wassermann test in a diabetic because antiluetic treatment may influence favorably the course of the diabetes, and the treatment of syphilis and diabetes are combined very easily. This is not true if the complicating infection is tuberculosis. The good state of nutrition necessary for the control of tuberculosis is difficult to accomplish in diabetes. The seriousness of this situation has been much relieved by insulin. It is wise to remember, however, that even with insulin, overweight in a diabetic is unfortunate and is not necessary in tuberculosis. I see no reason why obesity should not be the same menace in a patient with tuberculosis as in a healthy person. The aim of treatment in such a situation should be the maintenance of a wholesome state of nutrition with the minimum amount of metabolic strain or insulin dosage with which it can be accomplished.

Tuberculosis as a complication in diabetes, although becoming less with the better control of tuberculosis and the better treatment of diabetes, is still a great menace, and should be sought for constantly. Do not be satisfied with diabetes as a cause of debility and weight loss in a patient without making sure his lungs are clear.

Acute general infections carry a double menace—their own and the increased severity of the diabetic state which they invariably induce. With the fever and increased metabolism, perhaps with the over stimulus of endocrine secretions antagonistic to that of the islands of Langerhans, the sugar tolerance is so depressed that the diabetes can no longer be properly treated by dietary measures alone. Insulin is practically always necessary and is the one great help. It makes

available to the body the larger amounts of readily oxidized carbohydrate fuel which the febrile state demands, but there are special considerations in its usage. The sugar tolerance varies from hour to hour and one operates between the menace of coma on one hand and hypoglycemia on the other. For this reason it is wise to give repeated small doses of insulin rather than one or two larger ones. I have found it useful to give insulin every four hours, testing the urine at the bedside before each dose. If there is a quick reduction of Benedict's solution, a larger dose is given; if the reduction is slow a smaller; and if there is no reduction, the insulin is omitted. The urine is tested hourly until the reduction test calls for more insulin, beginning again from this point the four-hour schedule. If there is starvation, or if the functional depression of vital organs, so commonly seen in acute febrile states, affects the kidneys, alkali therapy not otherwise necessary may become very important. In this connection, the inefficient breathing with consequent exhalation of carbon dioxid and tendency to relative alkalosis of pneumonia must be kept in mind. The same principles apply in the handling of diabetes in the presence of acute localized infections such as carbuncles. Fortunately, the acute infections do not seem to make the diabetes permanently worse. These patients can usually be reëstablished at their previous levels after the infection. For the definiteness of this statement we have the high authority of Elliot P. Joslin.[1]

All kinds of gastro-intestinal disorders complicating diabetes present to the clinician nice analytical problems, but are usually not serious. Constipation in diabetes is the same problem, no more, no less, than in its absence. The loss of fluid, uncertainty on the part of the clinician as to the foodstuffs actually metabolized, and the general disturbance of balance of the vegetative nervous systems resulting from a diarrhea, make it a serious possibility in diabetes. It should be given immediate attention. Achylia gastrica as a cause of chronic diarrhea applies to diabetics as well as to other patients. The treatment of gastric or duodenal ulcers according to the Sippy schedule, or by keeping in mind the splendid practical principles of Alvarez, is entirely possible while feeding the diabetic what he should have. If the gastro-intestinal disorder demands surgical attention it should be carried out with assurance.

Surgical treatment wherever indicated should be instituted promptly. The relief of these complications helps not only the diabetic but often the diabetes. The decision for or against operation can be made on the merits of the complicating disorder alone. I tell my surgical colleagues that if they give us two days' notice, they may operate on a diabetic without considering him such. During those two days we saturate glycogen stores by burning plenty of glucose with insulin as necessary, and keep the tissues well filled with fluids. Two hours before operation, glucose and insulin are administered in amounts determined by the severity of the condition. After the operation, fluids, carbohydrates, and sometimes soda are administered, each as early as possible and by whatever channel is available. Insulin is always given, the dosage controlled by the same factors and technic as presented above for acute infections. In acute surgical conditions, where several days' preparation is not possible, the postoperative part of the schedule alone is very effective.

Thyroid disorders complicating diabetes create probably the most discouraging situation in the realm of clinical metabolism. Almost everything a thyrotoxic patient presents should be avoided in diabetes. The elevated metabolic rate demands much readily oxidized carbohydrate and at the same time lowers the sugar tolerance of the diabetes. The delicately balanced, rapidly running mechanism of the thyrotoxic patient makes swings in the severity of the diabetic state very easily instituted. The diabetes affords an added risk in any surgical procedure already dangerous enough. Of course these patients are improved by removal of the thyroid, but the improvement is that of the thyrotoxicosis and its influence on the diabetes, not of the diabetes itself. The problem is difficult but not insoluble in many instances. It is discussed well by Joslin and Lahey.[2]

Pregnancy as a complication of diabetes occurs but is uncommon. Miscarriage is frequent, but not as common as before insulin. Insulin is almost always necessary to carry a patient through successfully, but must not be used without close observation because, with the general disturbance of endocrine balance, fluctuations in glucose tolerance occur and the danger of hypoglycemia lurks. The delivery should be considered as an operation and treated as above outlined. Successful lactation is difficult to accomplish in diabetes, and for it insulin must be used. Always remember when determining the dosage that much carbohydrate is eliminated by the breasts. Moderate undernutrition in the pregnant diabetic is as desirable as in any, but the threat of the toxemias of pregnancy urge a constant replenishment of glycogen stores.

Fullness of years and diabetes, up to the present, has meant the late onset of the disorder and therefore that it is mild. Diabetes in the elderly

is usually simply handled. Keep in mind that the patient's arteriosclerosis, aged myocardium, cerebrum and liver parenchyma probably need a higher blood-sugar level than in a younger organism. Make changes slowly, use insulin cautiously, and do not rely too much on the findings in the urine.

When there is a chronic kidney lesion in a patient with diabetes, he is indeed seriously ill. Only one consideration arises in reference to this relationship. One of the organs which is important in the regulation of alkali reserve is damaged. This affords a possibility of another type of acidosis, at the same time making more likely the acidosis of diabetes.

Complications in diabetes affecting the ears, eyes, teeth, genitalia, and skin need no special consideration, except to emphasize the importance in diabetes, as in health, of correcting functional strains and removing physiologic irritants. In their handling, the principles set down in reference to infection and surgical conditions apply as forcefully.

Among the blood diseases, pernicious anemia complicating diabetes merits special mention. Murphy and Blotner[3] have shown beyond question that in liver there is a blood-sugar-reducing substance active when taken by mouth. It is not in the fraction effective for pernicious anemia, but by feeding whole liver both the constituents are administered. It is possible, therefore, now to relieve pernicious anemia and control mild diabetes by the administration by mouth of one substance, that substance being, not a medicine, but a delectable article of diet. Unfortunately, at present liver must be taken raw.

A division of the complications of diabetes into avoidable and unavoidable is probably not justified. All probably are avoidable. The most common and most serious is coma. To say anything about coma is to start a discussion for which an hour would be inadequate, and which should be presented in a paper devoted entirely to that subject. Always consider a patient in coma as an acute emergency case and as one in acute shock and collapse and to be so handled. The introduction of fluids is as important as giving insulin. Large doses of insulin are not necessary for they accomplish no more than small ones. Twenty units every hour is better than forty units every two hours. It is not necessary to give glucose for there is enough sugar in the blood to be burned, if it were possible to burn it. It is also worthy of emphasis that even in mild diabetes coma can begin suddenly (overnight) with even mild infections such as coryza or a boil.

Arteriosclerosis as a complication of diabetes raises an interesting academic discussion. Certainly arteriosclerosis and the train of symptoms following upon disturbed circulation are very common in diabetics. The possible rôle of lipemia and hypercholesterolemia in the etiology of arteriosclerosis should be kept in mind in planning the diabetic dietary. The need for glucose, of a scarred myocardium, should counsel caution in the use of insulin in the arteriosclerotic as in the elderly diabetic.

Complications of diabetes involving the skin, pruritus, intertrigo, and furunculosis improve with the control of the diabetes. Xanthochromia seems to be due to an excess in the diabetic diet of articles containing lipochrome, and to be improved by their omission. Xanthoma diabeticorum does not clear up so readily.

In the eye, retinitis and lipemia retinalis are relieved promptly with the control of the hyperglycemia. Cataract occurs in patients at any age if the diabetes has been relatively severe and of long standing. Under insulin treatment some of the lenticular haziness is said to improve, but this is one of the serious complications of diabetes.

5300 Wilkins Avenue.

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3. Blotner, H., and Murphy, W. P.—"The Effect of Liver on the Blood Sugar Level." *J. A. M. A.,* April 20, 1929, 92: 1332.

TREATMENT OF DIABETES

ORLANDO H. PETTY, M.D.
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During the decade that preceded 1923, diabetes was treated by an initial interval of two or three days to a week of fasting, followed by weeks and even months of semi-starvation, with low carbohydrate, high fat, fasting, and green-vegetable days at frequent intervals. The severe diabetic in this period had an initial month, yes, months, of institutional treatment, and then as a rule faced slow starvation, or ended it all sooner by breaking dietary restrictions and succumbing to its fatal complications.

The genius, Banting, when he gave insulin to the medical world, rendered this method—up to this time the most efficient—obsolete. No longer is it considered necessary or practical to institute treatment by placing the patient on a low, or basal caloric intake, and continuing this days or weeks to determine his tolerance and aid in the calculation of possible insulin dosage required; or, should he become sugar-free upon this semi-

starvation diet, to consume weeks gradually adding carbohydrates and increasing total calories until a sustaining diet is reached. The practical method, to my mind, if the patient is not in precoma or coma, is to prescribe a diet that will maintain physical and mental efficiency; then, clear up the glycosuria and reduce blood sugar to normal with proper doses of insulin, which is frequently needed for only a few days. This usually limits the period of hospitalization to about two weeks, and during this time the patients are taught all the details necessary for their part in controlling diabetes.

Insulin is not habit-forming, and when properly administered, not harmful. I know of no reason why we should follow even partially the methods of the decade before insulin. The fact, however, that before insulin was used diet had been used universally and not found curative is not sufficient evidence for the disuse of a carefully weighed diet. It is granted that diet is still the fortress constantly guarding the life functions of the diabetic, but insulin is the sword that causes the retreat after a successful invasion, and repulses future attacks. Modern warfare advocates the driving out, and not the starving out, of the enemy.

We proceed as follows: A careful history is taken. We use the periodic health examination blanks prepared and published by the American Medical Association, adding special questions applicable to diabetes. Then the physical examination is made. This always includes a special examination of the anatomical parts most frequently injured by a prolonged disturbance of carbohydrate metabolism. From the standard normal weight of adults, we usually deduct ten per cent, and estimate the calories of their dietary prescription as 30 per kilogram of this so-called ideal diabetic weight, divided as follows: protein, one gram per kilogram of ideal weight; carbohydrate, 80 to 100 grams per day; and the remaining calories made up with fats—a diet that will reduce the overweight and increase the underweight.

The dietary prescription at the beginning of treatment is temporarily determined as above, or by formulas for surface measurement, this prescription being occasionally altered by individual clinical observation, aiming to develop the highest mental and physical efficiency in the patient. The various high fat or high carbohydrate diets are not used. The majority of diabetic patients do better following the conservative midground of sufficient carbohydrate to permit a fair helping of any vegetable or fruit, one or two small slices of bread daily, and the usually allotted proportion of protein, making the total desired caloric intake by the addition of fats, and observing accepted ratios to avoid a tendency to acidosis.

The dietary prescription is not changed oftener than once weekly, usually not so frequently. If we change diet and insulin frequently, we have two variables and it is difficult to standardize for either; but with the diet fairly constant, insulin dosage is rapidly determined and rarely do we have insulin shock or low blood sugar reaction during the two weeks' hospitalization of the patient. The insulin dosage is varied as indicated by daily postabsorptive blood dextrose determinations. Hospitalization is considered absolutely essential for all patients requiring insulin, and urged even in the mildest case.

The same plan is followed for children, except we give one and a half to two grams of protein per kilogram of body weight, and usually a proportionately higher caloric intake, always giving sufficient food to keep the child-standard, normal height and weight for age, according to accepted tables.

To those who properly treat many diabetics, this outline is commonplace, but there are thousands of diabetics who receive the following advice from their physicians: "Do not eat any starchy foods, as potatoes, bread, cereals, pastry, ice cream, sugar or candy, and of course we will not use insulin except in a grave emergency, for it is a habit-forming drug." A few others who think they are a step higher give the patient some instructions and then advise that the measurement of food be done with side dishes, forgetting that side dishes are like human feet—of many sizes and shapes.

Too many physicians advise their diabetics in this careless, inaccurate way because they will not take a few hours to learn how to fill a dietary prescription with various foods for each meal. A diabetic free from complications can eat any vegetable or fruit, including berries and melons, and whatever meats, game, fowl, and sea food he desires, provided the amounts of protein, fat, and carbohydrate are kept approximately to his prescription limits. I know of no data that condemn the starch of potato or cereals, and recommend only the starch of low-percentage green vegetables, yet many physicians prohibit cereals and ordinary bread, some advising gluten bread instead. Many diabetic manuals written for the patient explain in detail the simple calculations of a prescription diet, and if a physician assumes the responsibility of treating a diabetic, he should master one of these methods and then personally see that each patient is instructed in the calculation and weighing of food, and in a practical knowledge of vitamin and mineral content.

In a diabetic, normal in other findings, a fasting blood sugar not over 120, with urine sugar-free, is the ideal. In a patient past sixty years of age a slight hyperglycemia is not objectionable—we think in most cases, desirable. We usually permit a blood sugar of 140 to 150 milligrams per 100 milliliters of blood in a diabetic of advanced years. If the elderly have previously had a blood sugar of 200 or over, they feel stronger and are at the same time free from the complications incident to a hyperglycemia, if their blood sugar is kept at the above level.

Insulin is the only therapeutic agent besides diet which is of proved specific value in the treatment of diabetes. This statement has been made hundreds of times by those whose clinical training, hospital, and laboratory contacts have qualified them to give an unprejudiced, scientific opinion, yet many physicians persist in using other substances as substitutes. The most frequently used of these is synthalin, or neosynthalin, and myrtomel, a claimed extraction from blueberry leaf. Published scientific data and personal studies, aided by my associates, prove, in my judgment, that synthalin or neosynthalin is toxic in therapeutic doses, and that myrtomel has no effect upon carbohydrate metabolism. The action of insulin is not wholly understood, yet I know of no physician who questions that insulin, if properly administered, is an aid in the treatment of severe diabetes. Why some physicians continue to use the above substances on really sick patients I cannot understand.

The highly potent, specific action of insulin makes its administration for the first week or so in many cases very difficult, and this I think explains its lack of universal use. In an occasional case it is extremely difficult to avoid the undesirable high blood sugar and yet not have the unpleasant and sometimes dangerous reactions of a hypoglycemia. The difficulties of avoiding either of these undesirable conditions doubtless lessen its use when it is definitely indicated. We proceed as follows: If the blood sugar after 24 to 48 hours on the efficiency diet outlined is markedly above normal, insulin is given in small doses. The first day's dose, I think, can safely be one unit for every 25 milligrams of desired reduction of blood sugar, dividing the beginning twenty-four-hours' unit into two doses, one before breakfast, the other prior to the evening meal. The second day's dosage should be similar, but the evening dose estimated by the before breakfast blood sugar. After two or three days of this method, one has fairly reliable data by which to estimate future dosage.

Early in the course of standardization, one should give at least two doses daily, morning and evening. If more than two doses are required, a midnight or 3 a. m. dose should be given. In some of the difficult cases requiring large amounts of insulin, we give five doses daily, one before breakfast, noon, and evening meals, and one at midnight, and the fifth at 3 a. m. We aim to give the largest dose in the morning, next largest in the evening, and the smallest doses, if more than two are required, at noon and night time.

If this general outline is followed, experience will soon enable one to use insulin successfully, the aim being not to see how little insulin can be used, but how much the patient requires.

It is possible to balance the insulin dosage with the caloric requirement of the patients so accurately that we advise those taking irregular strenuous exercise, either in sports or labor, to reduce the insulin dosage before exercise from two to four units, thus preventing a low blood-sugar reaction.

Adherence in general to the above regimen of dietary control and insulin administration almost eliminates complications, and this is especially true in the prevention of coma. Physicians giving special attention to the treatment of diabetes no longer boast of the number of coma cases they treat, because if the number be large it indicates either lack of control of their patients, or lack of proper influence on their fellow practitioners who refer cases to them. Coma is preventable under the above treatment, and prevention is the best treatment.

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ABSTRACT OF DISCUSSION

Of Symposium on Diabetes

CORTLANDT W. ELKIN, M.D. (Pittsburgh, Pa.): There is no condition in medicine which will teach the physician as much as the proper handling of the diabetic patient, because it involves so many things. In the prevention of diabetes, we should aim to control overeating and obesity. The control of these two conditions will probably aid in the prevention of two of the most important complications of diabetes—arteriosclerosis and gangrene. It has been shown that the high fat diet, particularly high cholesterin, has a tendency to develop arteriosclerosis and gangrene. We cannot save all our patients who have these two diseases—some of them die without diabetes and some with it, but we can save many of them. In the moist form of gangrene, operation should be carried out immediately. In some of the dry forms, healing occasionally occurs without operation.

In the estimation of blood sugar, particularly the first one, the blood nitrogen should be estimated. We often find that patients with so-called diabetic coma are still in coma after the hyperglycemia has disappeared. In two such cases I found that they had an attendant neph-

ritis and uremia. The same precaution might apply to other diseases, and I wish to suggest that occasionally hemorrhage and hemiplegia may occur in the course of a diabetic coma and prove rather confusing.

As to the presence of diabetes in pregnancy, I think it is wise always to estimate the blood sugar in such patients with glycosuria. It may be true diabetes rather than lactosuria.

I agree with Dr. Petty's method of diet, for I think it is the true method and saves time. There are times when one would prefer to start with a lower, rather than the full maintenance, diet. I refer to the markedly obese patients whom we wish to reduce a little more rapidly than with the full maintenance diet.

My method of controlling the dosage of insulin is to take the postcibal blood sugar rather than the fasting. If the postcibal sugar is low, it is dangerous to push the insulin any further, regardless of the fasting blood sugar level.

As to blood sugar in older patients, it is true that we permit a glycosuria. It is rational to do so, but I think we should not go to the extreme in this matter and permit too high a diet. Particularly in fat patients we increase the possibility of gangrene.

As to the use of glucose with insulin in the treatment of coma, I believe it is a rational procedure. It increases the output of urine, and apparently aids in relieving the patient.

Henry D. Jump, M.D. (Philadelphia, Pa.): I wish Dr. Jonas had stressed more the objection to the terms *glycosuria* and *sugar-free*. We have been too accustomed to diagnosing diabetes by the presence of sugar in the urine and determining the treatment by its presence or absence. The words are misleading. In most diabetics sugar does not show in the urine until it exceeds 170 mg. to 100 c.c. of blood. In many cases the threshold is much higher. If, then, we depend on the presence of sugar in the urine, we permit the patient to go on with this excess of sugar and its associated conditions to the detriment of his health.

I recently saw a diabetic, who previously had received insulin when sugar was found in the urine and none when she was sugar-free. No blood-sugar determination had been made. I found an excess in the blood (220 mg.) but none was found in the urine. Gangrene was beginning in one foot. This patient illustrates another point common in diabetics. When she was nearly standardized, we found an unaccountable marked increase in the blood sugar one day. An increase in her insulin caused a severe hypoglycemia in the evening. The next morning the blood sugar was up again. The evening shock was avoided by reducing the evening dose of insulin. We did not correct her increased hyperglycemia of the morning until the family locked the refrigerator when they retired.

We ought not to use the terms *glycosuria* and *sugar-free* except in connection with the amount of blood sugar. He who treats diabetes with such standards only in his mind is on dangerous ground and is doing only a part-time job.

Dr. Jonas (in closing): Dr. Jump has brought out that it is possible to have a fairly high fasting blood sugar and have insulin shock in the middle of the day. We encountered this same experience early in the use of insulin and investigated it by making hourly blood-sugar determinations for twenty-four hours on such patients. We found after giving insulin and breakfast that the blood sugar decreased rapidly until after luncheon, when it rose slightly to be followed by a further drop until near the evening meal, when it began to rise. After the evening meal and insulin, the blood sugar decreased until some time during the night when it would again arise.

As a result of these studies we frequently make blood-sugar determinations before each meal in order to obtain a more accurate idea of the efficiency of the dosage of insulin.

Dr. Petty (in closing): We permit all patients, if physically fit, to exercise and to take the usual exercise incident to their daily life, and even while they are in the hospital we encourage mild exercises. As to violent exercise, we can avoid hypoglycemia by having the patient reduce the insulin dosage from two to four units before he takes such exercise as swimming, horseback riding, or unusually hard work.

One point about sugar curves. None of us had time to tell one half of what we know. In connection with the sustained high curve Dr. Jonas showed in diabetics, he stated, as we all know, that while this happens in diabetes yet the curve may return to normal within three hours. I was afraid there might be a wrong impression, for the curve can drop to normal within three hours and the case still be true diabetes.

I wish to stress what Dr. Jump said. Urinalysis is not half the story. Another point very important to those doing family practice is that no diabetic mother should ever be permitted to nurse her infants. That, I believe, is now accepted by our best authorities.

THROMBOSIS OF THE LATERAL AND CAVERNOUS SINUSES*

J. J. SULLIVAN, JR., M.D.
SCRANTON, PA.

Macewen in his work, "The Pyogenic Infection of the Brain and Spinal Cord," divides lateral sinus thrombosis into three stages. In the first stage the thrombosis is partial or complete, and disintegration is not established. Other symptoms are: (a) Slight fever. (b) Rigors are usually present, and slight rigors are exceptional. (c) Headache, slight or severe, limited to the affected side. (d) Slight tenderness over mastoid emissary vein. (e) Slight edema and tenderness below tip in the posterior triangle of neck. (f) Leukocytosis with increased polynuclear count.

During the second stage, in which there is disintegration and absorption, the following is found: (a) Temperature above normal and distinctly fluctuating. (b) Frequent rigors. (c) Headache and tenderness over emissary vein. (d) Edema and tenderness on posterior triangle. (e) Increased blood count as above.

In the third stage there is (a) excessive absorption and chills or rigors followed by great and marked fluctuation of temperature, sometimes subnormal and then rapidly rising to 104°

*Read before the Section on Eye, Ear, Nose, and Throat Diseases of the Medical Society of the State of Pennsylvania, Erie Session, October 1, 1929.

or more. (b) Severe headache. (c) Marked tenderness over the mastoid emissary vein. The posterior triangle and even the jugular vein may be tender to pressure. (d) Still greater leukocytosis and polynuclear count. The count is greater in sinus thrombosis than in simple mastoiditis, especially the polynuclear count.

I always have the temperature taken every three hours for the first ten days or two weeks following all mastoid operations; obtain a preliminary blood count, instruct the nurse to note headache, rigors, etc., and I watch the patient very closely, especially if a perisinuous abscess is present, or if the exposed sinus is suspicious looking. I always expose the sinus where the bone is softened over it. It is very comforting to know its appearance and it helped me in one of the cases, not operated upon, but reported in this series.

Thrombosis of the cavernous sinuses is rare, and exceptionally so as a complication of mastoiditis. We expect it more frequently from a nasal accessory sinus suppuration, furunculosis of the nose, abscessed teeth, etc. When it is of otitic origin, it extends through the superior or inferior petrosal sinus to the cavernous sinus. When it is from an inflammatory condition in the nasal accessory sinuses, it extends through the ophthalmic vein. The general symptoms are similar to a lateral sinus infection. Characteristic symptoms are marked edema of the periocular tissue and protrusion of the eyeball. It usually spreads to the other side through the circular sinus. This shifting from one eye to the other is a differential symptom between thrombosis and an inflammatory process in the orbital cavity. In case 1, which I will report later, the symptoms started on the operated side and spread rapidly to the opposite one. Ptosis, strabismus, exophthalmus, and edema of the eyelids were characteristic. The nerves involved were the second, third, fourth, sixth, and the first division of the fifth. The third nerve was found to be involved more constantly.

In summing up, I would advocate impressing on the mind of the general practitioner the seriousness of a suppurative otitis media and its dangerous complications. He has been well instructed in the matter of focal infection originating in the tonsils and the teeth. I would stress: (1) The advisability of resection or ligation of the vein before the sinus is cleaned. (2) The great benefit of blood transfusion. (3) The secondary operation of resection or ligation in serious cases as a means of decreasing mortality.

Whenever, after a simple or radical mastoid operation, the patient does not improve, and his temperature is up and down in its course, even if the blood count is not characteristic, and whether or not a perisinuous abscess has been found, and when all other causes have been excluded, then we are justified in opening the sigmoid part of the lateral sinus.

I would stress: (1) The prevention of intracranial complications by early intervention in acute suppurative otitis media. (2) The necessity for early and thorough mastoid surgery. (3) The danger of an acute exacerbation of a chronic suppurative otitis media. (4) The recognition that a temperature of 100 in an acute otitis media means suppuration (possibly). If it advances to 101 to 102°, it has progressed beyond the middle ear. (5) The value, in the early stages of an acute otitis media, of the tuning-fork tests, especially as a later aid to detect suspicious mastoid suppuration, by means of the Weber-Schwabach test, as described by Dr. George W. Mackenzie of Philadelphia. Other symptoms and the x-ray help to complete the picture.

I should also like to mention the use of the spinal manometer as a diagnostic means, as reported by Drs. Ayer and Toby, of Boston, at the American Otological Society meeting in 1925. Jackson and Coates in their recent and valuable book say: "In a limited trial this has proved to be a rational and accurate procedure in complete blocking of sinus." With an occluding thrombosis in a lateral sinus, the manometer reading will be higher than normal, approximately between 200 and 250 mm. If firm pressure is applied over the jugular vein of the occluded sinus, there will be no change in the reading. When pressure is applied over the jugular vein on the opposite side, thus blocking both sinuses, there will be a marked and rapid increase. This is diagnostic of complete blockage of the sinus that is opposite to the one on which the pressure is applied. In the presence of a parietal clot, the findings will be less definite or doubtful. This method is especially valuable in the diagnosis of a double sinus thrombosis when you are in doubt. In making the test, complete relaxation produced by an anesthetic is more satisfactory. The pressure must not be maintained too long or damage to the brain tissue might result.

The blood picture shows an early lowering of the red-cell count and of the hemoglobin with an increase of the white-cell count. Of more significance is the advanced polynuclear count, with the lowering of the red-cell count and of the hemoglobin. Dr. Wells P. Eagleton (Newark, N. J.) has for sometime advocated the tying of the common carotid in cavernous sinus infection and in meningitis complicating lateral sinus

thrombosis. He says that the primary object of one of his papers is to show that edema of the brain, an accompaniment of a septic condition, abscesses, and infarcts, may be diagnosed at an early date by: (1) the presence of hemianopic indentations of the field; (2) the presence or absence of papilledema may be of some localizing value in suppurative diseases of the brain, provided the nature of the lesion is considered; (3) localized meningitis of the bulbar cisterna presents a symptom complex consisting of posterior and middle fossa symptoms, in which bitemporal hemianopic indentations associated with a peculiar type of semistupor and sixth-nerve paralysis occur; (4) oculomotor group dysfunctions may be studied through their connection with the vestibular apparatus.

A convulsion or an incomplete and transient paralysis occurring in the course of a blood-stream infection may be a manifestation of a small infarct with an associated cerebral edema. The transient character of the convulsion or paralysis and the complete hemianopia which so frequently follows the convulsion or accompanies the paralysis point to an edematous origin, especially because (although the convulsions, paralysis, and complete hemianopia rapidly disappear) the hemianopic field defects may continue for a considerable period. Dr. Eagleton advocates the necessity of repeated fields being taken daily as a routine by a trained technician.

In all there were fourteen cases in my series and four deaths. I am reporting nine of them, but do not consider it necessary to go into detail about the other five, with the exception of one. It was a delayed case, of five-weeks' standing, with a typical blood and temperature chart. The patient was in a very poor condition when brought to the hospital and an unfavorable prognosis was given. A simple mastoid operation was done, the jugular vein was tied, and the lateral sinus, which was filled with a broken-down clot, was opened. The patient died one week later from a general septic condition.

Case Reports

Case 1.—A radical mastoid operation was done two days after admission, when a large perisinuous abscess was found with granulation over the sinus. The sinus was suspicious looking. The patient was in a serious condition and two stages of operation were advised. The temperature decreased and kept fairly low until the tenth day, when it increased. A second operation was performed on the twelfth day. About three or four days before death a cavernous sinus thrombosis developed. A postmortem was not allowed. On the day of operation, there was an increased leukocytosis and polynuclear count. The blood count was negative. I think I was a little too conservative in this case. I delayed the operation on the vein and lateral sinus too long.

Case 2.—This patient had a simple mastoid operation, but a very large mastoid. A perisinuous abscess was found and one fourth of the lateral sinus exposed was nearly blue in color, but apparently normal. The blood count was fairly characteristic but the temperature began to go down and the patient looked good. The blood count gradually became normal. The patient recovered without a secondary operation. The temperature averaged in the mornings 99 to 103 for twelve days, then gradually dropped to normal. The pulse averaged 90 to 120. The specific gravity of the urine was 1.020, and it contained albumin, epithelial cells, pus, and an occasional hyaline cast. The blood count was as follows:

Date	*Oct. 15, 1925*	*Oct. 17, 1925*	*Oct. 22, 1925*
Red cells	3,940,000	3,430,000	4,160,000
White cells	17,400	15,120	14,200
Hemoglobin	70%	64%	72%
Smear polynuclear leukocytes	89	86	77
Small lymphocytes .	9	11	19
Large lymphocytes .	2	3	4

The culture showed the streptococci predominating, and a few staphylococci present.

Case 3.—Ten days after a simple mastoid operation, diplopia, which lasted four or five days, and paralysis of the rectus externus developed, with severe headaches, both frontal and temporal. The blood reports were characteristic. The blood count was normal ten days after the operation. Although advised, there was no secondary operation and the patient recovered.

Laboratory findings showed the presence of Staphylococcus albus in the right ear. A culture made on the following day showed small staphylococci predominating (mixed infection). The blood count was as follows: red cells 10,000; white leukocytes 15,600; large mononuclears 1; smear eosinophils 0; differential count small lymphocytes 8; transitional 2; basophils 0; large lymphocytes 5; polynuclears 84; myelocytes 0. Two days later the blood count showed the following: leukocytes 9,800; polynuclear leukocytes 72; large lymphocytes 4; small lymphocytes 20; myelocytes 0; basophils 0; eosinophils 0; transitional 2.

Case 4.—Through the courtesy of Dr. Sheridan I am reporting this case. When first visited, I found a small, emaciated boy with a high temperature. Because of his serious condition we simply exposed the lateral sinus and zygomatic cells, and removed the tip. There was a perisinuous and small extradural abscess present. About one-fourth inch of dura was exposed near and above the mastoid antrum. The blood count at this time was of no value. After a rest of a few days we opened the sigmoid part of the sinus and found a clot. We resected the vein from about two inches above the clavicle. The blood count after the first operation became very characteristic. Blood transfusion was advised. The recovery was stormy.

Case 5.—The patient, suffering from a severe pain in the right ear, consulted me, Jan. 16, 1924. This condition had persisted for over a week. The tympanum was incised, but the pain persisted. The patient was removed to the hospital where the x-ray showed a diseased mastoid. He had a very high temperature which remained at 103 all the time. Three days after entering the hospital, a simple, complete operation was performed which showed the mastoid filled with pus and débris. The dura exposed over the mastoid antrum for one-

fourth inch was slightly red. Because there was a perisinuous abscess, the sinus was exposed one-half inch and a culture taken. There were no granulations over the lateral sinus. The sinus was apparently normal. On about the sixth or seventh day in the hospital, his temperature started to go down, and remained down until the tenth day when it suddenly rose. From that time on until the eleventh, twelfth, and thirteenth day it started to go down again, when on the afternoon of the thirteenth day it rose to 103°. He was operated upon on the thirteenth day. The sinuses were opened and free pus and clot were found. The internal jugular vein was not involved. The jugular vein was tied high up, and the facial vein was also tied. On Feb. 10, 1925, a blood transfusion of 500 c.c. was made. His wife was the donor. A culture from the lateral sinus showed streptococci. The blood count in this case gave no help.

Case 6.—This patient was admitted on July 3, 1924. He had a high fever and complained of pain over the appendiceal region. The general diagnosis, covering a period of several weeks, was that of some focus of infection. Not discovering the cause of the high fever, although the temperature chart suggested an infection in some of the large venous channels, a lateral sinus infection was not thought of. He did not give the history of a discharging ear, nor had either of his ears discharged while he was under observation.

On July 10, 1924, my assistant examined the patient and obtained a history of a previous infection in the right ear. His examination showed the following: Frontal sinuses, large and clear; left antrum, hazy; no pus in the nose, left tympanum, negative; right, red but not bulging; spontaneous nystagmus, horizontal type to the right. He ordered an x-ray of the mastoid and a complete blood count. The blood picture previous to this time, July 9th, was: blood culture, negative; negative Widal; negative malaria. On July 4th, the leukocytes numbered 24,720 and the polynuclears 92. On July 8th, there were 18,000 leukocytes. We saw the patient on July 14th, when the count was: leukocytes 25,000, polynuclears 78, and the blood culture was positive for pneumococci. Examination by means of the x-ray showed a slight cloudiness over the right mastoid. On July 15th operation was done on the right mastoid which was found to be filled with liquid pus and débris. The lateral sinus exposed was yellowish in color. It was opened and free pus was found. The mastoid was filled with gauze and the jugular vein exposed. This vein was filled with pus to about one inch above the clavicle. It was resected as high up as possible, in the usual manner. The sinus was cleaned out and the area of vein removed. On July 18th, a culture showed the pneumococcus. Blood transfusion of 250 c.c. was again done, with the father the donor. The patient's temperature continued high and fluctuating. On July 22d, we examined his lungs and found about 1 oz. of mucopus in both sides. His lungs were tapped every other day until, on the fourth day, no fluid was found. His temperature gradually returned to normal and he was discharged Sept. 1, 1924.

Case 7.—A woman, aged about 35, was subject to suppurative chronic otitis media of her right ear since childhood. She had a cholesteatoma. The x-ray findings, blood count, etc., were vague. A temperature chart, covering a period of at least two weeks, was typical. A complete radical mastoid operation showed a sinus completely thrombosed. The jugular vein was ligated with the facial vein. Blood transfusion was recommended. Death occurred in two weeks.

Case 8.—A girl, aged 19, had suffered from chronic suppurative otitis media since childhood. She had been ill for four weeks with scarlet fever. She came to Dr. Thos. P. Martin, of Carbondale, for examination, who found that she showed a complete loss of the right tympanum; a remnant of the malleus was present; no cholesteatoma; and no spontaneous nystagmus. She could hear a moderate voice for a distance of one foot. Her caloric test was negative. The patient was very sick and septic looking.

The operation (complete radical) showed pus pulsating when the mastoid limb was opened. The cortex of the sinus was exposed and a fistula was found in the upper limb. The jugular and facial veins were ligated. The sinus was exposed backward to the normal tissue and a large clot was removed from the upper part. The sinus wall was resected. Drainage was established in the direction of the bulb of the jugular vein. The temperature in this case was typical and the diagnosis was made by Dr. Martin previous to my examination. The patient recovered.

Case 9.—A child, aged 6, with chronic suppurative otitis media, had been operated on (simple mastoid) about four weeks or so ago. Multiple abscesses were numerous over its head, arms, and legs. The jugular vein was ligated and the sinus opened. The bleeding was free. Death occurred several weeks later.

A normal blood count should show the following: white-cell count, 4,000-6,000; red-cell count, 5,000,000-5,200,000; hemoglobin, 98-110 per cent; polymorphonuclears, 68-74; large lymphocytes, 3-8; small lymphocytes, 20-26; coagulation time, 4-6 minutes.

The signs of an acute infection are an increase in the white-cell count, ranging from 10,000 to 20,000, with the polymorphonuclears increased to around 80.

A low-grade, chronic infection may show a low white count of 4,000 or 5,000 with a marked increase in the small lymphocytes to 30 or 40 per cent.

In secondary anemia, the red count remains fairly high—around four million—but the hemoglobin is very low—from 30 to 50 per cent.

Summary

(1) An early diagnosis of thrombosis of the lateral and cavernous sinuses is necessary.

(2) A plea is made to the general practitioner for the early recognition of the dangerous types of suppurative ears.

(3) Most cases are usually far advanced when seen by an otologist.

(4) There is a great benefit from blood transfusion.

(5) Certain diagnostic signs and tests are of value.

(6) Thrombosis of the cavernous sinuses is exceptionally rare as a complication of mastoiditis.

(7) It is expected more frequently from a nasal accessory sinus suppuration, furunculous nose, abscessed teeth, etc.

228 Scranton Life Building.

ABSTRACT OF DISCUSSION

Frederick J. Bishop, M.D. (Scranton, Pa.): The real man to discuss this paper was our late lamented friend, Dr. Sears, and I know this Section at some future time will take proper recognition on his death.

Cavernous and lateral sinus thrombosis is a very large subject, and it is obvious that one paper could not cover the subject completely, to say nothing of the time it would take to read the paper.

In lateral sinus thrombosis the great question after diagnosis is, whether to ligate and then open, or to expose the sinus as a preliminary step, ligate, and then open. From reading the textbooks, we do not know which procedure to follow, and it is largely a matter of one's own experience.

I have had two cases of cavernous sinus thrombosis, with the usual results. Because we do not have many cases of definite cavernous sinus thrombosis, I think we should report them.

As has been said, the source of infection is usually from the external nose, nasal chamber, lips, or teeth, but very few cases have been reported following acute sinus infection. It usually follows an acute exacerbation of a chronic sinus. The venous drainage seems to me to be the most important thing. These sources of infection are carried through the venous channels by way of two routes: (1) the superior and inferior ophthalmicus, the sphenopalatine, and the pterygoid process, which empty directly into the cavernous sinus; (2) the anterior facial and the angular vein, which empty into the cavernous sinus by way of the internal jugular vein.

As to *treatment*, the textbooks have very little to say about cavernous sinus thrombosis.

We are advised to use a mild antiseptic for the little abscess in the nose, or absolutely eradicate it. The second step in the early case is to ligate the veins; and the third would be an operation after thrombosis is established. The Hartley-Krause operation is similar to the steps made in operating on the gasserian ganglion or similar to the Mosher operation on the orbital cavity. I understand that he has never done it himself on a living subject.

I will describe a case I had in consultation. A young woman consulted her family physician on Sunday, complaining of a small abscess in the nasal cavity since the day before. Some antiseptics were prescribed and she went away. She called at the doctor's office on Monday and again on Tuesday. At this time her nose was considerably swollen and her right eyelids were very much swollen. These conditions progressed until I saw her on Thursday. Then both eyes were completely closed; there was marked exophthalmia of the right eye (the other eye was practically as bad); over the right mastoid area there was marked edema since the previous day; there was no vision in the right eye; and the patient was delirious at this time. Examination of the nose showed little pus and very little swelling. The prognosis was very unfavorable. The next morning she died. A postmortem was refused.

John F. Culp, M.D. (Harrisburg, Pa.): I think it would be very enlightening if Dr. Sullivan would tell us more about the indications for ligation of the internal jugular vein in lateral sinus thrombosis. Two or three years ago one of the most prominent otologists in this country was in Harrisburg and in going through the wards I showed him a patient who was recovering from a lateral sinus thrombosis. He asked me if I had ligated the internal jugular vein and I said I had not, because at that time the child's condition was not such that I felt that he could stand any more surgery; so I reserved it for a few days later, but the patient got along so well that it was not necessary. He said that only in one or two cases in his practice had he felt it necessary to ligate this vein. I understand from what Dr. Sullivan said that with him it is a routine procedure. As Dr. Bishop has said, it is a moot question, but it seems to me we should be able to arrive at some definite understanding as to just when ligation of the internal jugular vein is indicated.

C. Ford Heard, M.D. (Erie, Pa.): Dr. Sullivan hardly spoke emphatically enough in his advice to the general physician about ear conditions. One feels almost like using a club when getting a history that four days ago Doctor So-and-So called in the evening to see a child with ear trouble, leaves some drops, and says the ear ought to rupture in the morning. It does not rupture, they keep on using the drops, and after considerable delay the child is seen by some one who is supposed to know something about the ear.

In the cavernous sinus cases, which of course are more common than reported, there was one thing that was not brought out. I have seen a few cases following the blocking of the inferior dental nerve for tooth extraction, and I condemn this blocking. It is done too frequently. One might better put the patient to sleep than to go in there blindly, and dentists are not always too careful about their procedure.

A. Spencer Kaufman, M.D. (Philadelphia, Pa.): Fortunately, since the general practitioner has been educated to the dangers of ear conditions, we see less sinus thrombosis than we used to, and this makes it more imperative to be on the lookout for it and make an early diagnosis.

In regard to the treatment, or the operation, in 1916 I wrote a paper on this subject in which I said that I took my stand with the men who ligated in every case, and I have not changed my opinion. I feel that when the sinus is opened, and the clots are curetted or drawn out by suction, as was the procedure of my late lamented chief, Dr. S. MacCuen Smith, there is always danger of some part of the clot getting into the circulation and causing an abscess in one organ or another, usually either the liver or lung. Harold Hays, of New York, in cases of sepsis complicating an acute mastoid, with the sinus apparently healthy in the sigmoid portion, will ligate but not resect the jugular vein and not open the sigmoid portion. I have never done this, but Dr. Hays tells me he has had very good results.

One of the greatest difficulties in the differential diagnosis of lateral sinus thrombosis in children is in cases of acute adenitis complicating a mastoid operation where absorption from the wound has taken place. There is the up-and-down temperature, but the chills are not as typical in children as in adults, and there is a tenderness in the anterior and posterior triangle, which makes the question of diagnosis exceedingly difficult.

Dr. Sullivan spoke about the danger of intravenous injection of mercurochrome and other preparations. I do not know what he used, but I am accustomed to using acriflavin in all cases. In the type of case in which Dr. Hays advises the procedure I mentioned, I

have used acriflavin with exceptionally good success, using 20 c.c. of a one-half-per-cent solution intravenously. There is absolutely no reaction, no kidney irritation, and it can be injected in severe cases as frequently as every six to twelve hours, with a feeling of freedom that does not exist in the use of mercurochrome. In fact, there was one case that I lost in which I feel that the mercurochrome was responsible for the shut-down in the kidneys, and the patient died of uremia. I formerly used 10 c.c. of a one-per-cent solution, but one time Dr. John A. Kolmer suggested 20 c.c. of a one-half-per-cent solution and I have used it since.

The important point made by Dr. Sullivan was that in mastoid surgery there should be an enlarging of any exposure of the dura and sinus. They should be enlarged sufficiently—as a matter of fact there is no limit to the amount of exposure within reason. If there are adhesions between the sinus and the bone, or the dura and the bone, it should not be enlarged beyond that. If there are no adhesions, a good-sized opening, not less than the size of a thumb nail, should be made. Furthermore, granulations within or over the dura or sinus should not be disturbed, as their removal will often start up a sinus thrombosis or meningitis.

JAMES A. M. RUSSELL, M.D. (Erie, Pa.): Dr. Heard was in Canada five or six years ago and talked with Dr. Little of Kingston concerning blood-stream infections. Dr. Little has done considerable experimental work with a solution of crystal violet. He makes a stock solution of one per cent in 30-per-cent alcohol. Of this solution he uses 1 : 10,000 in a normal saline solution. His injections, experimentally, are 20 c.c. at a time. Just at this time I had a patient, a boy with a positive blood-stream infection and he recommended the use of this injection every two hours. It seemed to us that these were rather frequent injections, so we started it at longer intervals and decreased the interval. We had no reactions constitutionally from it.

Since that time we have had several cases of blood-stream infection, positive cultures being obtained, and we inject intravenously 100 c.c. of a 1 : 10,000 solution. We have done this either once or twice a day. Before every injection we take a blood culture, and from day to day we can see the number of colonies on the plate decrease. This is good only for Gram-positive organisms. The mercurochrome we feel is good for Gram-negative organisms. There has never been any reaction from the injection of crystal violet. It is a blue solution, but there is no color in the urine, no reaction of any kind, and having had such splendid results with it, it is the only drug we inject in cases of blood-stream infection.

DR. SULLIVAN (in closing): I do not use mercurochrome or iodin; I use blood transfusion in a citrate solution as it gives me the best results.

Some of the cases in my series I did not operate upon. The cases reported by me were all late cases, some of four or five weeks' standing. The point I tried to bring out was that these patients were all handled by three or four physicians and were not seen early by our service. We had a mortality of four in eighteen cases.

Several years ago an English doctor reported six or eight supposed lateral sinus thrombosis cases before the Triological Meeting at Atlantic City; he did not operate upon them, and they all got better. You can imagine what would happen if such an article were published in the PENNSYLVANIA MEDICAL JOURNAL and went before the general mass of physicians. One or two men objected to his statements, because when a lateral sinus thrombosis or infection is present in a patient, one does not need to be told that an operation is necessary. In an acute mastoiditis case, during the first week the complications are more apt to indicate meningitis; the third or fourth week an infection of the lateral sinus is apt to be present. The temperature averages 102 to 104, going up at night and being normal or subnormal in the morning, and there are chills. The symptoms are characteristic. When there is a high, fluctuating temperature, an increased polymorphonuclear count, an increase in the white-cell count, and a diminution in the hemoglobin and red-cell count, there is only one thing to do: Ligate the vein and clean out the sinus.

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*Symposium On Disease of the Gall Bladder**

CHOLECYSTOGRAPHY

JOHN F. McCULLOUGH, M.D.
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During the past few years so much has been written on this subject that it needs no introduction to the progressive physician. That the advent of a method of visualization of the gall bladder upon the x-ray plate has been a decided advance in the study of gall-bladder disease is a recognized and established fact.

From the first demonstration of gall stones, twenty-five years ago, until 1924, the best that could be hoped for from x-ray demonstration of gall-bladder disease was the demonstration of stones containing enough calcium salts to cast a shadow. The average examiner rated about forty to fifty per cent correct diagnosis from his radiograms. Graham's work has placed diagnosis of gall stones by radiogram at ninety per cent or better. It has placed the diagnosis of gall-bladder disease upon a more efficient basis.

To Graham and his coworkers we owe a profound debt of gratitude for their persistent work in perfecting this valuable procedure. Their first clue towards the solution of the problem of visualizing the gall bladder was furnished by Roundtree, who established the fact that phenolphthaleins were excreted by the liver. It remained for Graham and his coworkers to develop a compound of phenolphthalein which would cast a shadow upon the x-ray plate. They employed some forty-eight different phenolphthalein compounds of which four proved practical, but two were satisfactory. One of these, sodium tetraiodophenolphthalein, is the most widely used today. Graham prefers its isomer, phenoltetraiodophthalein.

* Read before the Section on Surgery of the Medical Society of the State of Pennsylvania, Erie Session, October 1, 1929.

Graham's work is based upon the employment of intravenous injection of the dye. The administration of the chemical by mouth was introduced by Menees and Robinson. It is the most natural mode of administration, and it has proved reliable. It has been found so nearly to equal in accuracy the results obtained by the intravenous method that it is the most generally employed method today. The choice between the intravenous and the oral administration is purely a personal one. The degree of success to be obtained lies in the adoption of one method and then the perfection of every detail in the technic and becoming thoroughly familiar with the interpretations. Every means should be used to secure technical excellence in the films made. It is necessary to make exposures until the optimum quality for the patient is obtained—the patient submitting to a second and even a third examination, if necessary.

The fundamental requisites for a normal cholecystogram are simple: x-ray opaque material should be administered, which must be excreted by the liver; it must be deposited in the gall bladder, and it must be concentrated to such a degree that a sharply outlined uniform shadow can be registered upon the x-ray film.

It is generally conceded that a normal gall bladder will show a uniform opacity on the x-ray film fourteen to sixteen hours after ingestion of the dye and it will show marked decrease in size and density, if not complete disappearance, within three hours after a meal rich in fats.

The pathologic manifestations on the x-ray films are rather well defined and generally agreed upon:

(1) Stones with too little calcium content to cast a shadow are seen as rarefied areas in the opacity produced by the dye on the radiograms. The opaque, dye-laden bile surrounds the nonabsorbent stone and visualizes it by contrast of shadow.

Case, of Battle Creek, in a recent report of seventy-seven positive stone cases, found at operation a correct diagnosis in 96.1 per cent.

If the stones contain calcium enough to cast a shadow, they may very easily escape observation when surrounded by the dye. It is, therefore, essential that the x-ray examination be made before the dye is administered so that x-ray opaque stones may not go unrecognized in the dye-filled gall bladder.

Much difficulty is often experienced on account of gas in the duodenum and colon, the gas shadow being superimposed upon the opaque shadow of the gall bladder and resembling very much a noncalcified gall-stone shadow. By a series of radiograms made with slight variations in the angles of the beam of the x-rays, gas can often be ruled out; if not, reëxamination should be made.

(2) The absence of a gall-bladder shadow after dye administration has a definite and serious significance when the technic has been accurate and has been carefully checked. It is regarded as indicating gross abnormality denoting: blockage of the ducts, a vesicle full of stones or débris, or abnormal mucosa. It is necessary, therefore, to weigh the evidence very carefully so that it can be definitely ascertained if there is no shadow and if none can be produced. Occasionally a very faint shadow escapes the eye, or poor management and faulty technic may fail to bring out the shadow. Variation in the position of the gall bladder may result in its being obscured by the spine shadow. If diaphragm cones are used, the gall bladder may not be in the field of exposure or it may be so off center that there is lack of detail, with obscurity and doubtful shadows. Every possible effort should be made to locate accurately the position of the gall bladder and then bring out the greatest contrast and detail possible on the roentgenograms.

Any obstruction of the cystic duct from within or without the duct may prevent dye-laden bile from entering the gall bladder. This includes sufficient edema of the wall temporarily to prevent entrance of dye-laden bile. This has been offered to explain why a shadow, absent upon first examination, is observed on a second test, when the edema is reduced or relieved.

Stricture and atrophy of the ducts are causes offered for finding no shadows. Obliteration of the ducts by old inflammation or a collection of débris and stones may easily prevent entrance of the dye-laden bile. Extensive disease of the liver has been mentioned as a cause of the absence of shadows on radiograms. Impairment to the extent of insufficient excretion to visualize the gall bladder is extremely rare, however. Cases of jaundice usually result in production of no shadows.

(3) Aside from demonstration of what is regarded as normal gall-bladder shadows, stones, and evidence of pathology by absence of dye deposit in the gall bladder, cholecystography reveals various deformities of the gall bladder in a high percentage of cases; such are manifested by irregularities of outline and malposition of the gall-bladder shadow. Adhesions are suspected in most of such findings. Instances are reported, however, in which gall bladders buried in adhesions show no deformity on the cholecystogram. Fortunately, this is not the rule.

(4) Variation in the density of the gall-blad-

der shadow, spoken of as faintness of shadow, is a condition fraught with great chance for error. Here the greatest of care must be exercised in the evaluation of faintness of shadow. For upon faintness of opacity, the concentration function of the gall bladder is estimated with the resultant decision as to the presence of cholecystitis. Concentration of bile is a recognized function of the gall bladder. The concentration takes place by the loss of water and the addition of mucin from the cells lining the vesicle. This concentrating ability is one factor involved in the production of gall-bladder shadows. The mucosa, its blood vessel, and lymphatic supplies are acutely concerned with concentration of the gall-bladder contents. Stages of loss of concentration function are represented on the radiograms by degrees of faintness of the gall-bladder opacity. Graham, in discussing this phase of cholecystography, points out that since it represents stages in the loss of concentration function, it is correspondingly difficult to appraise; and it is in this group that mistakes in interpretation are frequently found. Rather extensive experience is necessary to gauge properly the density to be expected in a given case. A faint opacity may occur as a result of any of the causes producing nonvisualization. If there is little or no variation in the faint opacity at various examination periods (12, 16, 18, or 20 hours), and if there is no change in the size of the gall-bladder shadow during these intervals, it is generally looked upon as indicative of poor concentration and impaired elasticity of the gall-bladder wall and regarded as suggestive of cholecystitis.

While operative reports have been singularly favorable in confirmation of roentgen findings, as seen in numerous articles published within the last two or three years, still there is noted some evidence of doubt on the part of a few observers as to the absolute accuracy claimed for the test by its original investigators. It is regarded as a test of the functional activity of the biliary tract. It was received at first with unrestrained enthusiasm and, as is usually the case when a new method of diagnosis is so received, there followed a phase of exaggerated skepticism occasioned by failure of the methods to make good extravagant claims of its enthusiastic advocates. Case, in a recent report, presents evidence to support the early claims made by Graham.

Because of the wide differences in technic employed by various workers, there is bound to follow variations in results, which may reflect somewhat upon the accuracy of the test. Time alone will bring about standardization of the method and proper evaluation of the test. At present it is recognized that cholecystography has placed the diagnosis of gall stones upon a very accurate basis. It has given us in the form of absence of gall-bladder shadow upon the radiogram strong evidence of gall-bladder disease. Displacement and distortion may be visualized. They give valuable evidence of disease involving the biliary passages.

A good, dense, gall-bladder shadow nearly always indicates a normal gall bladder, while a faint gall-bladder shadow suggests functional impairment. Like all other physical aids to diagnosis it should be employed as but part of the evidence used in forming the final opinion in any given case. When so used it constitutes one of the most valuable diagnostic procedures introduced in recent years.

Jenkins Building.

THE TREATMENT OF CHOLECYSTITIS

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Cholecystitis, by a rather loose use of the term, has come to include certain noninflammatory or noninfectious diseases of the gall bladder, as well as the inflammatory type. Since this is the early stage of practically all gall-bladder disease, it becomes the most important for diagnosis and treatment. The onset of this stage of gall-bladder disease is insidious. For years, the patient may complain of gas or discomfort after eating. This may be followed at any time by upper abdominal pain, although not the violent type of typical gall-stone colic. Symptoms are obscure or difficult to interpret in the absence of violent attacks of colic. Patients will frequently deny ever having any pain, but will readily admit that they have had attacks of "acute indigestion" that were severe. Cholecystography is the most reliable diagnostic aid. At present, however, diagnosis of this stage of gall-bladder disease is often impossible.

Assuming that all gall-bladder pathology starts as some disturbance of metabolism, the internist can do much to relieve the symptoms or to control the disease. Occasionally these patients come to operation when the same uncertainty may be experienced that was encountered in the diagnosis. Every surgeon who does much abdominal work has opened an abdomen, with a diagnosis of gall-bladder disease, and found no apparent pathology. It has been advised under such conditions that the gall-bladder be removed on the strength of the history or the x-ray findings.

This seems to be heading in the direction of many unnecessary cholecystectomies. The gall bladder is a functioning organ and cannot be removed with the same impunity that a functionless appendix is removed. On the other hand, we have twice re-operated on patients and removed the gall bladder which we had previously left in our effort to be conservative, and given the patient entire relief of symptoms. I know of no way to determine the correct procedure in this type of case, which reminds me of Dr. DaCosta's summary of this question: "You'll be damned if you do, and you'll be damned if you don't."

In chronic cholecystitis, with or without cholelithiasis, symptoms are more definite and pathology is marked. The bile is usually sterile but positive cultures can frequently be obtained from the gall-bladder wall. Infection once lodged in the gall-bladder wall probably remains indefinitely to produce further pathology in other organs. If the attacks have persisted for some time, there will surely be found signs of cholangeitis or pancreatitis. This is a distinctly surgical condition and should be treated as such as early as possible in order to limit the pathology in the liver and pancreas as well as to stop the attacks. The surgeon says the internist is too slow in bringing these cases to operation. The internist says he has seen some postoperative morbidity that makes him pause. The surgeon says it is due to late pathology. The internist says it is due to postoperative adhesions. Both are right!

We, as surgeons, are concerned principally with postoperative adhesions and how to lessen them. There is no question that work around the gall bladder and liver is followed by more adhesions than surgery in any other part of the abdomen. Injury to the liver and soiling the peritoneum with bile during operation no doubt produces extensive adhesions. Drainage produces some adhesions that may be crippling. Having in mind the glowing reports of cholecystectomies closed without drainage, we ligated the cystic duct with linen in several cases, and found there was no leakage of bile when the drainage was removed. We then closed eighty-eight cases without drainage. The convalescence was much smoother in these cases than in the drained cases. There were no ill effects that could be attributed to the absence of drainage. We made it a rule to close only those cases in which there had been no injury to the liver and no bile had soiled the peritoneum and the field of operation was perfectly dry. The results in these cases were most satisfactory. We had one case, however, re-operated upon by Dr. Cashman, in which he found a stone in the common duct in the center of which was a linen ligature. About this time we also observed the distressing death of a patient who was closed without drainage. Since then we have discontinued closing without drainage. We now drain through the loin. This drain lies back of the stomach, duodenum, hepatic flexure, and bed of the gall bladder, and we have not yet seen any ill effects from it. I am convinced that the massive adhesions, the result of soiling the peritoneum, are the most serious cause of morbidity. These can be limited only by extreme care in technic. Occasionally there are attacks of postoperative upper abdominal pain caused by hyperacidity. These very closely simulate gall-stone colic. Whatever the cause, morbidity following many gall-bladder operations demands the closest coöperation between the internist and surgeon, if the patients are to be returned to health.

As to the type of operation, I think it is generally conceded that cholecystectomy is the operation of choice in most cases. The patient's condition, an empyema, or insurmountable adhesions may make a cholecystostomy advisable, but it is only a temporizing operation. We have re-operated in eight cholecystostomies and one cholecystectomy. The mortality in these cases is fairly satisfactory if sufficient time be taken to prepare them for operation. This is a very essential requisite of good results.

Acute cholecystitis is an entirely different proposition from any of the previous types. Here we have an acutely inflamed, thickened, gall bladder. Possibly it is distended with pus. The liver is enlarged. The whole operative area is teeming with bacteria. To operate on these patients invites disaster. The surgical profession is learning too slowly that acute inflammation at any place in the body is a condition to be treated with respect and not to be handled. The gynecologist learned this many years ago, and yet absorption is not as rapid in the pelvis as in the upper abdomen. These cases can be fairly safely handled by placing them on a rigid Ochsner treatment until their temperature is normal; then giving them large doses of paraffin oil and, twenty-four hours thereafter, liquid diet. They can then be brought back gradually to a condition that will justify whatever operative procedure may be necessary. This of course requires time, but is certainly time well spent. An occasional patient deciding at this stage that he does not choose to have the operation should not deter the surgeon from pursuing the safer course.

Summary

The noninfectious, noninflammatory, early stage of gall-bladder disease is a distinctly medical condition and much can be done to control the disease. The chronic inflammatory stage is as distinctly a surgical condition. Infection once lodged in the gall-bladder wall is persistent. The operation should be performed as early as possible in order to control pathology and decrease mortality and morbidity. In the late cases prolonged postoperative care will be required to return them to health. The acute inflammatory type can be operated upon safely between attacks, but not at any other time.

901 Wood Street.

ABSTRACT OF DISCUSSION

Of Symposium on Disease of the Gall Bladder

Nelson P. Davis, M.D. (Pittsburgh, Pa.): In the management of these gall-bladder and allied infections I have found two great stumbling blocks; first, the lack of an accurate diagnosis; and, second, the multiplicity of pathologic involvement. Every time I review the history and course of a patient who failed to recover after operation, I find that the patient had a little too much coronary disease mixed in with the cholecystitis or I actually found no gall-bladder pathology at all. This does not annoy us so much recently because we have developed at least a speaking acquaintance with this offender and, by keeping in mind the fact that these patients practically always show an atypical gall-bladder history, we are now able to check the situation with reasonable regularity. If I am in doubt about the operative outlook in a given case, I keep the patient and endeavor to decide how much surgery he can tolerate at operation and give him a little less than that amount.

In the patients who have developed pancreatitis, choledochitis, hepatitis, myocarditis, cholecysto-intestinal fistula, and what not, I still believe that the gall bladder is a real source of infection and that the patient will be benefited, most times, by its removal. In my hands the patients whose gall bladders have become fibrosed, actually producing cholecystectomy on themselves, are likely to give a disappointing operative result. I never close an incision after cholecystectomy without placing a soft rubber tube and cigarette drain down to the stump of the cystic duct and a slender cigarette in the subcutaneous layer. These drains tell me what is going on underneath.

In speaking about adhesions of the right upper quadrant, I have never felt that they are terribly disabling. It seems to me that after cholecystectomy one is bound to have many adhesions. We have to insult the colon by separating the adhesions, but I think they are probably taken better care of in the right upper quadrant than in any other part of the abdomen. You have to think first of the duodenum. It is relatively fixed and handles liquid contents practically altogether; then we must think of the colon—it is large and will still function even after being roughly handled. I have not found that adhesions worry us very much.

Bender Z. Cashman, M.D. (Pittsburgh, Pa.): Certain clinical features stand out: (1) the frequent association of adiposity and gall-bladder disease; (2) the relation of pregnancy with gall-bladder disease; and (3) the relationship of the acute infectious diseases. It is not uncommon for a woman to have her first pain in the gall-bladder region after delivery or during pregnancy. It is not unusual for a patient to date the digestive symptoms to an attack of typhoid fever and later on typical gall-bladder colic appears. Pittsburgh was a hotbed, as you know, of typhoid fever some years ago and frequently we get this history of indigestion dating from an attack of typhoid fever. We occasionally recover the typhoid organism from the gall bladder or gall stones.

Poor drainage of the gall bladder, I believe, plays a part in gall-bladder disease. We are often struck by the narrowness of the cystic duct and the difficulty in emptying the gall bladder. In cases where there are adhesions to the gall bladder, the traction of the colon or omentum on the gall bladder must interfere with drainage and produce a certain amount of stagnation.

Cholecystography is a laboratory procedure and subject to the same errors in interpretation as any other laboratory procedure. It should be correlated with the physical findings and the clinical history, but certainly we visualize more gall stones today than we did before this measure came into use.

A few years ago Graham advised the use of phenoltetraiodophthalein instead of tetraiodophenolphthalein because it is less toxic and because you can get only a cholecystogram but you can determine the liver function. We believe that the intravenous method is the more reliable but it has certain disadvantages and our procedure has been to use the oral method, and the intravenous method when we wished to check up on results. There are very few reactions with this dye. At the same time you can get an estimate of the liver function with the use of this dye test and I think this is very important.

I think it is well to give these patients glucose preliminary to operation if they have shown evidence of impaired liver function.

Cholecystectomy is undoubtedly the operation of choice in most cases, but there are certain cases where we must be satisfied with the less efficient but less formidable procedure of cholecystostomy. As Dr. Dixon said, the majority of these acute conditions will subside so that you do not have to operate in the acute stage, but in a certain few cases the patient is so ill or the desired improvement does not take place rapidly and gangrene is feared, and then it is wise to drain the gall bladder, remove the stones, and not remove the gall bladder until a later stage if this becomes necessary. In the very aged or in patients who are seriously handicapped or who are very poor operative risks cholecystostomy is the better operation.

In very obese patients spinal anesthesia is a great help. It makes a good exposure much more simple and with much less trauma to the patient. But in spite of careful preoperative treatment, and spinal anesthesia or any other anesthesia, I think we all agree with Dr. Deaver when he said "Do what you can and say what you will these obese patients add greatly to the responsibility of the surgeon."

Moses Behrend, M.D. (Philadelphia, Pa.): We have heard two very conservative papers which are full of good advice. There is no question that cholecystography is a very great aid to diagnosis, but it is not essential in clear-cut cases and I think there is much unnecessary laboratory work being done. In those cases mentioned by Dr. Dixon—the noncalculus cases of cholecystitis—no doubt a cholecystograph will be of some

help, but nevertheless when the abdomen is opened that is the time to judge whether or not the gall bladder should be removed. It is most difficult to know in these cases of noncalculus cholecystitis just what to do but, according to our experience, those gall bladders that are absolutely opaque, the gall-bladder wall having lost its luster, are the types of noncalculus cholecystitis that require removal.

The pancreas should always be examined. Many patients have fleeting attacks of pancreatitis and in those cases it is not right to remove the gall bladder, notwithstanding the statement of one of the speakers to the contrary. It is much better in the cases in which a hard head of the pancreas is found, or even the hard tail of the pancreas, to do a cholecystenterostomy or a cholecystogastrostomy.

I must also take exception to the remarks of the last speaker concerning an acute gall bladder. These patients should never be operated upon in the acute stage, and never be drained. If we wait long enough, the gall bladder can always be removed at a favorable opportunity and there is no question that a cholecystectomy is far better than a drainage operation.

There is a field for cholecystostomy, but the field is very narrow; it should be used very rarely. In the past year I have done three cholecystostomies and only ten days ago I did this operation upon a patient who had carcinoma of the ascending colon. It was a very favorable case. The carcinoma was removed and the gall bladder drained on account of the presence of the carcinoma. So far as the drainage is concerned, I think we must use good judgment. Every case in which a cholecystectomy is done cannot be drained. It depends on the amount of oozing from the liver, and after the operation is completed if we place a small gauze sponge against the bed from which the gall bladder was removed and watch this until after the appendix has been removed, then we can judge very readily whether or not the case ought to be drained. We do not drain any of our cases except where there is a great deal of oozing from the gall-bladder bed. Of course, there is no question but that the convalescence of those who are not drained is much better than those in whom we use drainage.

The entire surgery of the gall bladder should be rewritten on account of the introduction of spinal anesthesia.

M. C. Rumbaugh, M.D. (Kingston, Pa.): I congratulate Dr. Dixon on having closed so many cases without drainage. I have never closed an abdomen without drainage following removal of a gall bladder, but his idea of draining in the loin is a good one I believe, for in cases of ruptured stomach or in suppurative conditions I have frequently drained in the right loin and have had very good results. I believe also that there are times when it is impossible to operate immediately, but I do agree with the last speaker that it is possible to treat these patients medically, using Crile's method, and in a few days or perhaps a week they can be operated upon and the gall bladder removed.

One case mentioned brings to my mind a paper read a few years ago by Dr. Keene, in which he mentioned that following an attack of acute appendicitis, or sometime after the appendix is removed, gall-bladder disease occurs, and in these cases it is due to the lymphatic distribution in the gall-bladder walls, the infection ascending into this organ.

Lumbar anesthesia certainly makes gall-bladder work easier.

A PLAN FOR THE REDUCTION OF THE MORTALITY IN ACUTE APPENDICITIS*†

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One not familiar with actual figures will question the necessity for the development of a plan to reduce the mortality in acute appendicitis. Since there has been an increase of 22.3 per cent in the death rate of appendicitis between 1913 and 1923, and four times as many people die from appendicitis as from cancer before the age of fifty years, indicate that something should be done. The plan we present has for its basis a statistical study. We have no new thought regarding statistics. We offer, however, as corroborative evidence a check in the form of an analysis made in two different hospitals, by the same investigators. Three years elapsed between the analyses. Prior to and during the compilation of the statistics of the second hospital, the results of the analysis of the first were not referred to. The results are as correct as the hospital records and the personal equation permit.

There are certain variables which influence statistics generally, but they have little effect on the end result if we consider the law of averages. For instance, the average age of 750 patients operated upon for appendicitis was 25.6 years; of 252 patients, 28.1 years. This difference in the average age of the two series would have little influence on the mortality. Next to be considered is the type of patients, their social status, whether they are stubborn, suspicious or adverse to operation, or have had previous hospital experience. These are factors which delay the operation and influence mortality. Then there is the variability in the severity of the process: the acute fulminating type with severe pain is usually hospitalized early because the physician is more likely to be called; in the moderately severe case, the medical adviser is more apt to temporize, and frequently this results in the so-called interval appendix. We believe that the safest plan would be to have all cases of interval appendices brought to the hospital and have the surgeon manage them. One should remember that perforation and gangrene do not always evidence themselves by severe symptoms and that they may occur as early as six hours. A factor usually affecting mortality

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† From the Departments of Surgical Research and Pathology, Temple University.

is the status of the family physician. If we were advising a friend in selecting a physician we would say: "Not so much when he was born, or from what college he was graduated, but whether he follows through," whether he follows his patient to the operating or postmortem table. Frequently internists do not witness operations on their patients. This may be the fault of the hospital management in not notifying the attending physician, or it may be the surgeon's fault—he may have changed the hour for operating. In addition, the lack of uniformity in the management of appendicitis creates embarrassing situations at times. A physician will make a diagnosis of appendicitis and advise the family that early operation is indicated; later to his chagrin he will find that the surgeon has scheduled the patient for operation on the following day. On the contrary, it would seem as though physicians do not realize that the operating table is, at times, the only place where early pathologic changes can be correlated with early symptoms and signs. In this country, the first operations for appendicitis were performed in 1885. Even at that time a differentiation between appendicitis and appendicitis with peritonitis was carefully made; today, forty-four years later, forty-five per cent of all cases of appendicitis have an associated peritonitis before they enter the hospital and less than five per cent are diagnosed as having peritonitis before they enter. *These are not statistics, they are facts.* The percentage of autopsies in the average hospital is increasing, but the percentage of physicians who attend them is not increasing commensurately. Office hours, emergency calls, and immediate autopsy due to early removal of the body may interfere in some instances. Some men have uniformly big attendance records at autopsies and these men are usually the busiest and rate among the best on the staff.

Table 1. Summary of Analyses of Two Different Hospitals

Compare percentage mortality and time that elapsed between onset of symptoms and operation in those who lived. Note the close approximation of elapsed time of those who died, the constancy of perforation, the percentage given laxatives, and deaths due to general peritonitis in both groups.

	Hospital No. 1 1926	Hospital No. 2 1929
Cases analyzed	750	252
Mortality rate	8%	10.7%
Average time between onset of symptoms and operation (lived)	69.1 hrs.	90.4 hrs.
Average time between onset of symptoms and operation (died)	151 hrs.	157.7 hrs.
Perforated cases	45%	46.8%
Perforated cases given laxatives	92.3%	87.6%
Deaths from general peritonitis	73%	77.8%

Table 2. Actual Results From Letter in Hospital No. 1

	Before Letter	After Letter	Reduction
Average time between onset of symptoms and operation	75.6 hrs.	56.8 hrs.	24.8%
Perforated cases	45%	24%	46.6%
Mortality	5.41%	3.12%	42.3%

Finally, the management of the patient by the surgeon affects mortality generally. There are times that knowing when to operate is just as important as knowing how. Knowing how affected fifty-five per cent of patients in this group —they were clean; knowing when affected forty-five per cent—they were unclean. Knowing when and how is much more important because 81 per cent of our mortality lies in the unclean group. Surgical judgment is more important than a finished technic, it usually takes longer to develop it. One may become technically dexterous by operating on animals.

In a general way we have called attention to the variables which affect mortality statistics. We cannot select patients with tractable dispositions; infections will vary in virulence; the patient cannot select a physician whose judgment is equally good in all things medical; and finally, the character of surgical management will always affect the mortality.

We wish to stress the fact that we are dealing with *hospital* and not *individual* mortality. The first group of cases summarizes the operative result of twenty-two surgeons; the second group, of thirty-three. There is not a surgeon but who will say to himself: "My death rate in appendicitis is not one in ten or one in twelve" —probably it isn't, but the chances are that if he is working in an average size, not a one-man, hospital, the death rate during one or more years in the past five has been that high. We wish this to be considered as a challenge to investigate, and if accepted, among the things that will be discovered is that hospital mortality affects the reputation of the entire staff. Morbidity, on the other hand, is more selective. Our living mistakes hound us—our catastrophes in the hospitals affect our colleagues—hospitals as well as individuals have reputations.

The onus of the increasingly high mortality rate in appendicitis is on the surgeon, the family

physician, and the public. Let us analyze these clinical records, over a thousand in number, and see how much each one of these three groups is responsible for this mortality. The items covered are: name, date of admission, family physician, operator, time in hospital, time between onset of symptoms and operation, laxative given, recurrent attacks, temperature and pulse, leukocyte count, anesthesia, type of incision, pathology, drainage, duration of operation, and remarks.

Of all appendiceal deaths, 77.8 per cent are due to general peritonitis. The following facts obtained by a painstaking scrutiny of clinical records show how the surgeon can help diminish the mortality. It is hardly necessary to mention that an appendix should not be removed in the presence of a general peritonitis, that liquids by mouth should be withheld after the operation, and that drains should not be removed early, etc. We found that 38.2 per cent of these deaths were due to general peritonitis: in 15 out of 20 cases the appendices were removed, in 10 out of 20 liquids were given within 24 hours after the operation, and in 6 out of 20 the drains were removed too early. In one case the appendix was ruptured on removal, in another a distended intestine was punctured to facilitate its replacement in the abdomen, in another a pocket of pus was opened to facilitate drainage, and in another a colonic irrigation of one gallon of water was given before operation. There was one death from local peritonitis. This was a perforation case in which no drainage was instituted.

operated upon for appendicitis to be reported at a staff meeting. (2) A letter sent to members of the staff and outside physicians referring patients to the hospital should contain the percentage of patients given laxatives, the average time between onset of symptoms and operation, results of analyses (see Table 2), and a request for coöperation by the use of stickers. (3) A check-up of clinical records every six months, a follow-up letter noting progress and soliciting further coöperation, and 100 stickers.

The stickers referred to should be attached to the monthly statements and should give the following information: *In the presence of abdominal pain give nothing by mouth. Never give laxatives. Call your family physician. Apply an ice cap or hot-water bottle. Abdominal pain which persists over a period of six hours is usually serious.*

Table 3 shows the results of an analysis of the symptoms and signs of appendicitis in sixteen standard textbooks of surgery as compared with an analysis of 231 clinical records of patients operated upon for simple appendicitis and appendicitis with local and general peritonitis. Note how closely the textbook analysis of appendicitis approximates that of appendicitis with general peritonitis (operative findings). The following may be deduced from Table 3: In the diagnosis of appendicitis one symptom is always present—*pain;* one sign is uniformly present —*tenderness* (absent in 11 per cent); and there is one corroborative test—the *leukocyte count* (absent in 20 per cent).

The coöperation of the director or board of

Table 3. Incidence of Symptoms and Signs

	Textbooks	No Peritonitis	Local Peritonitis	General Peritonitis
	.....	33.7%	54.0%	12.3%
Pain	93.7%	100.0%	100.0%	100.0%
Nausea	62.5%	35.2%	44.8%	42.3%
Vomiting	87.5%	50.0%	60.2%	80.9%
Local tenderness	100.0%	89.3%	89.8%	89.7%
Plus tension	.....	43.3%	39.8%	26.9%
Rigidity	100.0%	40.6%	44.9%	65.5%
Constipation	68.7%	.....	.....	.....
Increased temperature	87.5%	68.9%	76.9%	84.4%
Increased pulse	56.2%	44.1%	63.0%	84.4%
Leukocytosis	75.0%	79.7%	84.8%	95.0%

The analysis thus far has placed the major part of the responsibility for this high mortality on the surgeon. The following outlines a plan from the standpoint of the hospital showing how to obtain the coöperation of the medical staff and physicians referring cases to the hospital: (1) Analysis of clinical records of cases

public health is essential to the success of the plan. The following outlines the plan from the standpoint of the Director of Public Safety: (1) Hospitals are requested to permit an analysis of clinical records. (2) All hospitals are requested to adopt the plan. (3) A placard is sent to the druggist requesting his coöperation.

(4) Deans of the schools of pharmacy are requested to give lectures on the danger of giving laxatives in acute abdominal pain. (5) Principals of schools are requested to include the warning in regard to laxatives in their health talks to students. (6) Newspaper publicity. (7) Health talks.

TABLE 4. ECONOMIC ASPECT OF ACUTE APPENDICITIS
(Actual Results in Hospital No. 2)

	Without Peritonitis	With Peritonitis
Number of patients	130	96
Total number of days in hospital	2074	2893
Average number of days in hospital	159	30.1

The placard referred to should be displayed in the druggist's store and should read as follows:

The Director of Public Health Requests the Following:

(1) That we ask each purchaser of castor oil, citrate of magnesia, epsom salts, and rochelle salts, if it is to be given in the presence of abdominal pain.

(2) That you do not give laxatives in the presence of adbominal pain until you have consulted a physician.

(3) That we notify you that in the year 1926, 17,335 people died of appendicitis; 12,655 of these were given laxatives and of this number 11,680 probably died from laxatives.

(4) That we explain that laxatives increase the movements of the intestines which prevent nature's confining the inflammation to the appendix. Increased movements—therefore, laxatives—frequently produce perforation, peritonitis, and death.

ECONOMIC ASPECT OF ACUTE APPENDICITIS

Cost to patient. Using Table 4 as a basis, the stay in the hospital is 14.2 days longer, there is loss of wages, and the patient is more liable to complications, hernia, etc.

Cost to the city. Laxatives cost the people of Philadelphia each year over a million dollars in lives. The 1927 census showed the population of Philadelphia to be 2,035,000. The mortality of appendicitis is 14.8 per cent per 100,000 population. Probable deaths in Philadelphia from appendicitis are 20.35×14.8, or 301. Of these, 78 per cent, or 235, died from general peritonitis, and 88 per cent of these were given laxatives. Life insurance companies value a human life at $5000. Therefore, the cost to Philadelphia each year is $207 \times \$5000$, or $1,035,000.

Cost to the nation. The population in 1926 was 117,135,817. The appendicitis death rate was 14.8 per 100,000. The number of deaths during 1926 from appendicitis was 17,335, and in the same year the number of deaths from general peritonitis was 12,655. Of these 92.3 per cent received laxatives, and 11,680 of these probably died from laxatives. Through loss of lives, laxatives cost the nation annually approximately $58,400,000.

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ENURESIS*

ROBERT K. REWALT, M.D.
WILLIAMSPORT, PA.

No apology need be offered for the consideration of this too common condition. Many parents and some physicians are too apt to treat this disease lightly, usually paying little or no attention to it, and dismissing the subject with the expression that the child will outgrow it. Many children grow to be young men and women under the stigma of being bed-wetters. The evil effect of this unpleasant condition frequently casts a shadow on lives that would otherwise be happy ones.

Instead of the usual definitions of enuresis as involuntary discharge of urine or intermittent loss of control of urine, I believe that the definition of Bleyer[1] more nearly states the truth. His statement is that enuresis is a disturbance of micturition in which the physiologic control of the brain is blocked by stronger stimuli which have to do with the nervous mechanism of the bladder. This loss of physiologic control does not appear to lie in the brain. This is conceived to be true enuresis, and for this type the term "enuresis vera" is proposed, separating it from another condition which, although simulating true enuresis, is a mere perversion of habits in an irresponsible, usually neurotic and often mentally defective child. To this latter condition the term "pseudo-enuresis" may be applied.

Enuresis should be regarded as an entity and not as a condition depending on the existence of another disease. Many of the so-called etiologic factors of enuresis are simply pathologic conditions of which enuresis may or may not be a symptom. Many cases of pyelitis, vulvovaginitis, pin-worms, phimosis, diseased tonsils and adenoids, acute febrile diseases, etc., have occurred during which enuresis has been present. To my mind, this is not true enuresis.

The etiology of true enuresis is, as yet, not completely settled. The psychiatrists classify it as a conduct disorder. Undoubtedly their claims are entitled to great respect. But until the physiology of micturition is more thoroughly under-

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stood, the last word cannot be said. A most important contribution to the study of true enuresis has been made by Young.[2] He found that the opening of the sphincter of the bladder is not an act of inhibition, but is brought about by the muscles of the trigone. This correlates the well-known fact that the sphincters of the bladder, which are derived from the longitudinal and circular fibers of the detrusor and are of smooth muscle, cannot be under the control of the will and so cannot be relaxed to permit the passage of urine into the posterior urethra, whereas the muscle of the trigone, which passes through these sphincters, comprises striped muscle and is therefore capable of voluntary contraction.

Thus the etiologic factor may be due to faulty control of the nervous mechanism of the bladder. It is possible that further developments may show that enuresis is the act of micturition before it is time to do so.

The nocturnal form of enuresis is by far the most common. Occasionally it is accompanied by the diurnal form, which occurs alone in very rare instances.

The type of child suffering with true enuresis is generally otherwise healthy, well nourished, and intelligent. Most of my own cases were of this type. Very few were neurotic.

The prognosis in these cases is usually good. It should, however, always be explained to parents that a cure may take a long period of time and that relapses are common and should be viewed with patience and courage. Of course, the younger the child, the better the outlook. Many cases will clear up at the age of puberty, for no known reason. Every effort should be made to cure cases before this time.

The treatment of true enuresis should never be undertaken without the full coöperation of both the parent and the child. It is absolutely useless to outline the management of a case to an indolent or overworked mother. The physician's instructions will not be carried out. In no class of cases is it of more importance to secure the coöperation of the child. Here the physician must study the psychology of his patient.

The management of these cases may be divided into three phases: (1) general measures; (2) drug therapy; (3) psychiatric suggestions.

Under general measures an effort is made to keep away from a routine that is burdensome to both parent and child. The mother is instructed to give the child plenty of fluids until 4 p. m., after which none are allowed. A thorough evacuation of the bladder should take place before the child retires. This is important because many children, unless watched, will void only a small amount before retiring and consequently will wet the bed within an hour or two. At the end of three or four hours the child is awakened and made to walk—not carried—to the bathroom where he is encouraged again to evacuate the bladder.

Until a definite improvement has taken place it is better to awaken him again in four hours and repeat the procedure. If the child is old enough and trustworthy and the parent and physician have his coöperation, he may awaken himself with an alarm clock. Otherwise, the parent should supervise as before.

The only drug in which I have any confidence for use in enuresis is atropin. A 1: 1,000 solution is used with ascending doses to the point of tolerance and stopping just short of that point. For the diurnal and nocturnal type the doses are administered at 10 a. m. and 3 and 7 p. m. For the nocturnal type doses are given at 4 and 7 p. m. The starting dose is one drop and this is increased one drop daily until short of the point of tolerance. Most children tolerate atropin very well and will usually stand a maximum dose of from 1/400 to 1/100 of a grain. The maximum dose is maintained for a period of from two to six weeks and then gradually reduced.

While I do not regard atropin as a specific as Bleyer[1] claims, nevertheless I would not like to be without it in the treatment of enuresis. The psychiatrists and therapeutic nihilists may scoff, but atropin remains a most valuable remedy for this condition. In several cases which were doing well under atropin therapy, I tried substituting drops of water. The enuresis, which had subsided, returned, but promptly subsided again when the atropin treatment was resumed.

It will be found in certain cases that while the enuresis clears up and remains so for several months, there is a recurrence. It is necessary to go over the same route and repeat again and sometimes again. I recall a case in which I used this treatment ten times inside of four years before a permanent cure was effected.

The criticism is occasionally made that pediatrists do not know enough psychiatry. I believe that all pediatrists are, at least unconsciously, psychiatrists. Otherwise, how could they treat children successfully? The successful treatment of enuresis calls for psychiatric suggestions in every case. Hamill[3] states that, in the Children's Memorial Hospital of Chicago, all children suffering from enuresis are referred to the psychiatric clinic. He claims that the treatment given in these cases seems to be the specific form. Briefly, the treatment is based on the assumption that enuresis is a conduct disorder and that the child stops wetting the bed

when he so desires. It is pointed out to the child and explained to him that he must assume responsibility for his conduct when asleep. All other forms of treatment are against the child's interest as they have a tendency to excuse the child from assuming all the responsibility for bed-wetting. Much of the success of this treatment depends on the entente established between physician and child.

I have had no practical experience with this particular form of treatment, and yet I think that there is much in it that can be well utilized by pediatrists. There can be no doubt concerning the establishment of an entente between doctor and patient.

Crothers[4] has outlined a plan of treatment that has served me well in several instances. The success of this method depends upon the ability of the physician to convince the child that it is easier to stay dry than wet, and that it is up to the child to make the choice.

A case, which was seen last spring, will illustrate the success of this plan of treatment. A boy, twelve years old, was brought to me by his mother, with the statement that he had wet the bed at more or less frequent intervals since birth. He had been treated intermittently by several doctors, with no improvement. After examining him to rule out any physical defects or other diseases of which enuresis might have been a symptom, I explained to him that it was time that he stopped such a practice and that he could do it if he so desired. I then told him that since he and no one else made the bed clothes wet, it was up to him to wash them every time he made them wet. He smiled a little but agreed to do it. I then outlined a short routine as described under general measures concerning restriction of fluids and being awakened at night for the purpose of evacuating the bladder.

At my suggestion, an agreement was made between his mother and him that he was to have a quarter for every dry night for a month and at the end of that time a dollar a week for every dry week. The only punishment he was to receive was the washing of the bed clothes when he made them wet. The result was that he fell from grace twice the first week and once the second week and has been dry ever since. I believe him to be cured.

While all cases do not turn out so fortunately, this method of treatment has a very distinct place in the curing of true enuresis.

Medical Arts Building.

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ABSTRACT OF DISCUSSION

FRANCIS B. JACOBS, M.D. (West Chester, Pa.): At the State Medical Convention in 1921 I read a paper on the subject of enuresis, and having had experience in the use of pituitrin in forty-nine cases, I am deeply interested in the subject. I still have my notes on that paper, which was published the following year in the September JOURNAL. That paper was written after I had investigated the cases of enuresis in two large institutions—one an institution for girls and one for boys, each containing about 400 patients. Before that I had treated a number of private patients with pituitrin.

The results I enumerated in my paper were: cases treated, 49; greatly improved, 17; cured, 16; no effect, 16. When I speak of cures, I mean only those patients who were entirely relieved for three months, and as I saw only a few of them after three months, I cannot tell how long they were entirely relieved. I continued to use this treatment, however, with just about the same results as I received in my previous work.

Just recently I have had a private patient, a girl eight years of age, who had enuresis for three years. She had been unable to get relief. I tried using the tincture of belladonna, with no effect. I then told her mother that I would try her on pituitrin through injection. The first injection I gave half an ampule of pituitrin. The mother came back after three days with a smile on her face. She stated that the patient had not had any unfortunate mishaps since. She had had five injections, and has had unfortunate mishaps perhaps once a week.

I do not claim it is anything wonderful, but it has been helpful to me, especially with patients who are mentally below par, and particularly with girls. It seems to have more effect with girls than it does with boys. With those who are mentally below par, it must have the effect of stimulating the nonstriate muscle fiber of the sphincter.

The only bad effects I have noticed from pituitrin were that occasionally the patient would have a slight fainting attack, but in no case serious, and one or two of them have turned pale after the use of it.

HARRY LOWENBURG, M.D. (Philadelphia, Pa.): In the matter of treating enuresis, I think one of the worst things we can do for these patients is to hold out hope that the cure rests in the removal of tonsils, etc. I believe in this condition entirely too much surgery is done, and results promised that cannot be obtained.

I, too, have been very much impressed with the use of pituitrin injections. I was not aware of Dr. Jacobs' paper, but I was very glad to hear of his success with the use of pituitrin. In addition I have used the old fluid extract of ergot, giving from 10 to 15 milligrams four times a day, and, I believe, with encouraging results.

DR. REWALT (in closing): I was very glad to hear Dr. Jacobs' experiences with pituitrin. I have had no experience with it.

I hope that the rest of the audience took note of the statement Dr. Lowenburg made with regard to unnecessary surgery. While I did not stress that, it was very much in my mind, because I think any one who has investigated the subject closely will recognize that surgery for the cure of enuresis has been almost negligible in results.

Dr. Bleyer, who has written a very comprehensive paper, listed over 250 cases in which circumcision, removal of tonsils, fixing up decayed teeth, etc., produced

no results whatsoever. To hold out the promise of even a temporary cure is a dangerous thing to do, because the results do not justify it.

Case Reports*

ENDOCARDITIS AND PERICARDITIS WITH BLOOD-STREAM INFECTION OF STREPTOCOCCUS VIRIDANS

T. PALMER TREDWAY, M.D.
ERIE, PA.

A. H. W., Jr., aged 13½ years, had a mild attack of rheumatic fever seven years ago which lasted about one week. A few months later his tonsils were removed. There was no evidence of joint pains until three years ago when he had a second attack of about the same duration. At this time there was noted a faint "mitral blow." Following this attack, I was unable to detect any heart murmurs and he lived the life of a normal boy taking part in many strenuous sports.

On February 9, 1929, he complained of not feeling well and when seen he had a temperature of 103° F. and a definite "blowing mitral murmur." A mild infection of his pharynx was also noted at this time. The temperature curve for the first ten days was septic in type ranging from 100° to 103.2° F.

On February 13th, he gave the following blood picture: white blood cells, 21,000; red blood cells, 4,200,000; hemoglobin, 70 per cent (Dare). The blood culture showed a pure growth of Streptococcus viridans. Blood cultures were repeated on March 2d, April 9th, and May 8th, the first two again showing a pure growth of Streptococcus viridans. The last culture taken on May 8th was sterile.

On February 26th, a definite pericardial scratch was heard, but not until March 13th could it be definitely made out that there was a pericardial effusion. The effusion from this point increased rapidly; in one week the dullness extended one inch beyond the right nipple line. There was no increased dullness to the left. With the amount of effusion present it was interesting that the boy suffered no discomfort other than an occasional attack of dyspnea.

Rheumatic nodules were first noted at the end of the twelfth week and these were present only on the scalp. No petechiæ or evidence of emboli were noted during the entire course of the disease.

The temperature curve reached a normal line on June 13th, just four months from the onset, and from this time on the boy made an uneventful recovery.

The only joint involvements observed during the entire illness appeared in the left metacarpals and left shoulder, ten days after the onset, and lasted just four days.

The method of treatment used in this case was vaccines, the salicylates, and cacodylate of soda.

My reasons for reporting this case are: (1) The usual laboratory findings in a case of this type. (2) The almost complete absence of joint symptoms. (3) The development of pericarditis with effusion enabled us to put the infection of the heart in the rheumatic type thus enabling us to give a better prognosis.

Box 463.

* Read before the General Meeting of the Medical Society of the State of Pennsylvania, Erie Session, October 2, 1929.

BRONCHO-BILIARY FISTULA

EVAN W. MEREDITH, M.D.
PITTSBURGH, PA.

The mother of four children, white, and aged 44 years, entered St. Francis Hospital, October, 1928, complaining of severe coughing spells and expectoration of large amounts of frothy, yellow sputum. She was markedly emaciated, having lost thirty pounds in the last year.

She became ill eighteen months ago, with the initial symptoms of pain in the right upper quadrant of the abdomen, radiating to the right shoulder, and accompanied by jaundice, itchiness of skin, and light-colored stools. In September, 1928, six months after the onset of these symptoms, the patient had been operated upon at another hospital. Following this operation, the jaundice had slowly subsided, although her family physician informed us that such extensive adhesions were found that the abdomen was closed without exposing either gall bladder or bile ducts. Shortly after this exploratory operation, a cough developed, which has persisted. For several months the cough was nonproductive. Six months ago the patient began expectorating large amounts of yellow, frothy sputum, and during the period of observation in the hospital, previous to her second operation, the daily amount of sputum varied from a pint to a pint and a half.

The laboratory findings were as follows:

Sputum: Repeatedly negative for B. tuberculosis; positive for bile.

Blood: Negative Wassermann and Kahn tests.

Blood count: Red blood cells, 4,850,000; leukocytes, 21,700; hemoglobin, 90 per cent.

Differential blood count: Polymorphonuclears, 70 per cent; small lymphocytes, 25 per cent; large lymphocytes, 5 per cent.

Van den Bergh test: Direct delayed reaction indicating impaired liver function.

Blood chemistry: Chlorids, 519; nonprotein nitrogen, 32; creatin, 1.27.

Blood sugar: 0.093 per cent.

Stools: Repeatedly clay-colored and negative for bile.

X-ray: The lower lobe of the right lung showed a striated, mottled, opaque condition, suggestive of lung abscess.

Urine: Nothing definite.

Bleeding time: Two and one-half minutes.

Coagulation time: Two and one-half minutes.

At operation, a single large stone was removed from the common duct. The gall bladder was very much atrophied. It was not much larger than a good-sized lima bean, and contained a small amount of granular débris or sandy material but no bile. It was not removed. The patient made a satisfactory convalescence, and at no time following operation did she spit up any bile-stained sputum although a slight cough persisted for two weeks. On September 20, 1929, the patient wrote that her general health was excellent, she had regained her former weight, and was able to do her housework.

The most common cause of broncho-biliary fistula is the echinococcus disease of the liver and amebic abscess of the liver. The next to the most common cause is biliary tract disease, as in the case reported.

The pathologic conditions necessary in the establishment of a broncho-biliary fistula are: obstruction of the normal bile passages, partial or complete; hepatic abscess with cavity formation communicating with one of the large bile ducts; adhesion between liver, diaphragm, and base of lung with rupture of hepatic abscess through this adherent area into a bronchus. The most common point for rupture through the diaphragm is over the uppermost part of the convexity of right lobe of the liver. The fistula may originate in the left lobe of the liver and drain through a left bronchus, or it may perforate either the pericardium or mediastinum before reaching the lung and bronchus.

The outstanding symptoms are a distressing cough with expectoration of bile-stained sputum and a history and symptoms of biliary-tract disease.

The treatment is essentially surgical, and consists of removing the obstruction to the main bile ducts.

In the *Archives of Surgery,* March, 1928, is a comprehensive article by Morton and Phillips, in which they report one case of their own and forty-seven cases collected from the literature. Since then, one case has been reported by Seelig and Singer in the *Archives of Surgery,* July, 1929.

121 University Place.

COMPLETE UNILATERAL DIAPHRAGMATIC HERNIA

GILBERT B. MEYERS, M.D.
PITTSBURGH, PA.

The following case report is one of unusual interest not only by virtue of its rarity and the possibility of confusion in diagnosis but also because of its symptomatic occurrence in the later years of a normal life without definite etiologic history.

Mrs. J. D., aged 69 years, a widow and housewife, was seen by the writer on October 6, 1928. She complained of shortness of breath, which she first noticed when she went up and down stairs. Gradually it became worse until dyspnea was constant. One week ago she became very dyspneic and was unable to sleep at night unless sitting up. She had palpitation of the heart but no precordial pain. She had noticed some edema of her feet and ankles, but no swelling of the abdomen. She had a morning cough, with no expectoration. Her appetite and digestion have been good, and her bowels regular. She had nocturia once. During the present illness, there has been no diminution in quantity. Except for the past two or three nights, when the dyspnea became worse, she has slept well.

The patient's history of past illness is negative, save for two attacks of acute rheumatism. She has had no operations. Her menstrual history showed that she reached puberty when she was fifteen years of age, with regular, painless menstruation. Her menopause occurred when she was forty-five years old. During the twenty-five years of her married life she has had five normal pregnancies and labors.

The physical examination showed a flatness over the left lung, extending to the level of the sixth rib in the posterior scapular line. Breath sounds were absent over this area. Small, moist râles were present over the right base and over the apex of the left lung. The apex beat of her heart was invisible and unpalpable. There was no retro-manubrial dullness. The cardiac outline could not be determined by percussion. The maximum intensity of the first sound was noted in the fifth interspace, 9 cm. to the right of the midsternal line. The first sound was accompanied by a soft systolic murmur. In the second right interspace, the second sound was heard most clearly. It was faintly tympanitic and sharply reduplicated. The pulse rate was 68 per minute, and the rhythm was regular. There was a suggestion of a faint diastolic murmur over the aortic area. The blood showed a systolic pressure of 144, and a diastolic pressure of 70. The spleen was not palpable, and the liver extended about 3 cm. beyond the right costal margin. There was slight edema of the lower extremities, extending to the mid-tibial region.

The electrocardiographic examination revealed the following: Rhythm, sino-auricular; type, right bundle branch block; rate, 69; P-R interval, 0.16 second. The electrocardiographic diagnosis was right bundle branch block.

Stereoscopic x-ray films of the chest, taken October 9, 1928, showed the lung fields to be hazy, which I believe was partly due to a little thickening of the pleura and also to the thickness of the chest. The findings here were interesting because the heart seemed to lie on the right and to be transposed. The apex was on the right side, and no heart shadow was seen on the left. The right diaphragm could be seen indistinctly through the haziness of the lower right lung field, which was due to the superimposed shadows of the breast. The lower half of the left lung field was obscured by a very dense shadow which had the appearance of fluid, but without a definite fluid level, as below the upper margin of the dense shadow there was a rounded area suggesting gas.

On October 10th the patient reported for a fluoroscopic examination of the chest, as on the stereoscopic films we were suspicious of gas over the region of the lower left chest, which could not be accounted for at this examination. The area which was previously supposed to be due to gas was definitely larger and suggested that it was in the stomach.

The patient was given barium which passed through the esophagus normally and entered the stomach in about the normal esophageal region and then passed upward over the lower left lung field. The upper margin of the stomach, outlined by the gas shadow, was at about the level of the anterior end of the second rib. The heart was displaced very markedly to the right, no outline of the heart being seen to the left of the mid-line. I believe we were dealing with a congenital diaphragmatic hernia. The outline of the diaphragm on the right could be definitely seen and was

normal in position. No definite diaphragmatic line could be seen on the left side. In addition to the stomach, I believe there was a marked upward displacement of the colon as in one of the films there was a shadow lying to the left of the stomach region suggesting gas in the colon. Examination terminated abruptly as the patient's condition was not good.

In an x-ray picture of the chest, taken on October 18th, the stomach was within the shadow of the thorax. We believe, however, that there was a diaphragm on both sides. The diaphragm on the left side was arched very highly in the cavity of the thorax. We believe that this was not an absence of the diaphragm.

The final diagnosis was diaphragmatic eventration. It was probably a progressive enlargement of a congenital defect, with recent acute enlargement and resultant circulatory embarrassment caused by cardiac displacement and compression.

Jenkins Arcade.

ADDISON'S DISEASE

HARRY J. BELL, M.D.
DAWSON, PA.

H. W. B., white male, aged 28 years, was seen by the writer on May 13, 1929, complaining of lumbar pain, disgust for food, abdominal discomfort, and a degree of physical weakness that confined him to his bed. His father had died at 36 years of age from lobar pneumonia. His mother and one sister were living and healthy.

He had had the ordinary diseases of childhood, and gave no history of traumatism or of any infection except one attack of ulcerative tonsillitis. He did not drink alcoholics, was a moderate smoker of cigarettes, had always been in good health, and had worked every day either as a coal miner or as a day laborer.

During the latter part of February, 1929, he had an attack of influenza that kept him from work for two weeks. On returning to work he was unable to follow his accustomed occupation because of lack of physical strength. During the following four weeks he engaged in work that required but little physical energy, and even this gradually became burdensome.

On May 1, 1929, he was seized with an attack of acute pain located at the right costal margin, extending into the right shoulder, that lasted only a few hours and was diagnosed by a physician as acute indigestion. Immediately following this his family and friends observed that he was developing what they described as a "bad color."

During the next fortnight he had much gastro-intestinal discomfort, accompanied by loss of appetite, almost continuous nausea, irregular attacks of vomiting, looseness of bowels, and vertigo, with but little headache. These attacks would occur during the night as frequently as during the day. No cause could be found to explain them and the "bad color" continued to increase and deepen.

Physical examination showed that his body was much emaciated, his weight in health being 165 to 170 pounds. His weight now was 147 pounds. His skin was dry and harsh, and his color arrested immediate attention. The skin covering his face, around both axillæ, the hands, some discrete patches on the back, over the left ilium, and feet was of a dark smoky color, quite in contrast to the sallow, muddy color of incipient jaundice. His abdomen was retracted; his tongue, heavily coated; his breath, foul; he had a few decaying teeth; his tonsils and pharynx were negative. His temperature was 96° F., and his pulse rate, 76. His heart was normal in outline, the sounds perfect, and with a regular rhythm. The systolic pressure was 78 and the diastolic pressure, 56. He voided 50 ounces of urine in twenty-four hours. It had a specific gravity of 1.012, and was negative for albumin and sugar. A tentative diagnosis of Addison's disease was made and a correspondingly grave prognosis given.

During the next two weeks, the gastro-intestinal symptoms persisted without response to the effort directed toward their relief. His physical weakness increased, and the color of the skin deepened. It was found that the almost daily pulse and blood-pressure readings remained near those first observed. A consultation was requested which resulted, after a careful analysis of the findings, in a confirmation of the original opinion.

During the following three weeks, the gastro-intestinal symptoms persisted, disgust for food progressed to a total loss of appetite, with consequent loss of flesh and strength and increasing physical weakness, almost to the point of complete prostration.

About this time overanxious relatives and friends insisted that he be removed to a hospital. To this we offered serious objection in the belief that the additional exertion required for the journey would hasten the fatal issue. Against our advice, however, on July 8th he was removed by automobile to a hospital twelve miles distant over a rough country road for seven miles of the distance. The next day a von Pirquet test was done with negative results after 48 hours. The Wassermann and Kahn tests were both negative. The blood examination showed red cells, 3,400,000; white cells, 9000; hemoglobin, 65 per cent; color index, .95. On July 11th the urine analysis showed: specific gravity, 1.010; albumin, 1 plus; indican, 1 plus; hyaline and pus casts, 1 plus. On July 12th his blood pressure was: systolic, 40; diastolic, 40. Death occurred, July 13, 1929, from exhaustion, as per hospital record. Autopsy was refused by his friends.

FISTULA OF THE ABDOMINAL WALL FOLLOWING AN APPENDICEAL ABSCESS

CHARLES G. STRICKLAND, M.D.
ERIE, PA.

Mrs. E. T. S., aged 54 years, on September 20, 1928, had a large appendiceal abscess of twelve days' duration incised and drained. The appendix was neither seen nor felt. The convalescence was normal for this type of case, and by January 1, 1929, the wound in the right iliac region was completely healed.

Three weeks later the patient developed a painful mass in the right subcostal region with localized pain and fever. The shape, position, and size of this mass, and its remoteness from the site of the previous incision, made it necessary to exclude the gall bladder and kidney. Ureteral catheterization was done and cholecystograms made, with normal findings.

On January 22d, the mass was incised and found to be a colon abscess below the fascia recta. This abscess was sharply localized and no sinus leading to either the abdominal cavity or the previous wound area could be found. Following the drainage of this cavity, a fistula

persisted until June 14th. The drainage was at first purulent and latterly serous, never fecal.

On June 14th, the fistula, which had many ramifications in the rather fat abdominal wall, as shown by bismuth injection and the x-ray, was injected with methylene blue and traced down to and through the peritoneum into the lumen of the appendix. The appendix was 8 cm. long, only slightly thickened and, for what it had gone through, of surprisingly normal appearance. There were very few adhesions except at a point on the free border of the appendix at the juncture of the middle and distal third where the appendix was adherent to the parietal peritoneum and within which area the fistulous tract entered the lumen of the appendix through an opening only large enough to admit a probe. The appendix was removed, the fistulous tract in the abdominal wall excised, and the wound promptly healed.

This case is reported because: (1) A persistent fistula following the incision of an appendiceal abscess is today relatively uncommon and when it does occur invariably suggests to the operator the presence of a foreign body in the wound. (2) It seems reasonable to assume that after the primary abscess the cecum and appendix mobilized themselves, and at a second attack of inflammation the appendix was able to attach itself to the parietal peritoneum at a point far distant from the site of the original abscess.

153 West 7th Street.

CHRONIC INFECTIONS OF THE SPHENOID SINUSES*

C. FORD HEARD, M.D.
ERIE, PA.

The chronic purulent and the nonpurulent cases of sphenoiditis that cripple our patients with distracting headaches, or more seriously with an amblyopia to complete loss of vision and other possible nerve lesions, will be considered. The position of these sinuses and their relation to nerve, brain, and venous structures should include the postethmoid region.

Hirsch, of Vienna, showed so many specimens that had but one cell in the postethmoidal region, and it, approaching a sinus, that one can hardly consider the sphenoid without including the postethmoid region. An important fact to remember is that the bone formation is a very variable one. Some have a diploic type allowing for an early or rapidly progressive involvement of other structures but mostly that of the hard protective formation that blocks advance of the inflammation in these regions.

Besides the optic nerve, meninges, and cavernous sinus we have the third, fourth, and sixth nerves and the first and second divisions of the fifth nerve to consider as possible structures to be affected. Mayhap some of the distressing eye symptoms produced by muscle imbalance, or vague sensory disturbances of the fifth nerve may have, as their cause, an involvement of these nerve outlets from a chronic inflammatory involvement of these cavities.

Sluder has written at length on vacuum sinus headaches from faulty aëration of the frontal sinuses, and I have had many cases of blocked sphenoids that I would put in that group. Loeb, of St. Louis, reading a paper at an Academy meeting several years ago, stressed the fact that many operative measures on the sphenoid, for protracted headaches, were relieved without any actual disease being found. This observation would help prove the vacuum type.

In a diagnosis of trouble in this field we have many aids at our disposal, the two greatest being the nasopharyngoscope and the x-ray. We can shrink the turbinal and the septal mucosa to the limit and less than half the normal sphenoid openings can be probed or irrigated. The greatest number of sphenoids observed without surgical measures are in the chronic atrophic rhinitis cases. In the majority of cases some sacrifice of the middle turbinate must be made or attention given to a deviated septum before any real information can be obtained. The fact that no pus is detected coming from the sphenoid opening is no more positive than a negative Wassermann. The most expert can be wrong in his observation, for so many cases have shown pus on an operative opening or at a postmortem.

I am very partial to postnasal findings with the nasopharyngoscope; as for the x-ray, this field is a special one in which most roentgenologists feel their limitations. X-ray work that is confined to the head, with observation at the table and after, will more likely be certain and of greater accuracy. Roentgenologists have tried for years to obtain visualization of the sphenoid sinuses by radiographing the head at many different angles—posterior, anterior, lateral, and through the vertex. Until recently they never felt that they could offer much diagnostic help to the rhinologist.

These difficulties led Dr. A. Granger, of New Orleans, La., to experiment with the cadaver until he found an angle by which he could clearly project the upper border of the sphenoid without confusing superimposed shadows. This shadow is called the Granger line. Changes in clearness and thickness of this line together with density of adjacent shadows enables one now to diagnose, with a fair degree of certainty, hyperplastic and empyemic changes in the sphenoid.

* Read before the Section on Eye, Ear, Nose, and Throat Diseases of the Medical Society of the State of Pennsylvania, Erie Session, October 1, 1929.

When pus is found coming from a sphenoid or postethmoid region, with no crusting block or opening visible because of folds of mucosa, with headaches and no other cause found, a reasonable procedure is indicated. No one who has an appreciable knowledge of nasal physiology will slaughter normal structures in the nose more than necessity demands. But one must see to accomplish.

Hyperplastic disease of the soft structures may be followed by a rarefying process in the bone and the narrowing encroachment involve not only the optic canal but the other outlets in the outer and lower reaches of the sphenoid sinuses. Hyperplasia is a term that has been much discussed and by some recognized otolaryngologists denied.

After watching for many years, cases, that began with a moderate ethmoiditis, and to which little direct attention was given, progressive changes were noticed, polyps and myxomatous formation filling the olfactory regions. Call the changes hyperplastic, inflammatory, or what you please, but it is a condition that must be dealt with in a large percentage of cases and that percentage will vary as widely as climate does.

Any sinus affections controlled or cured before progressive bone changes occur should be material in clearing up complicating conditions. The only explanation for a continuance of symptoms must be that the bone changes have advanced beyond our control and we have little recourse, or causes persist of which we do not know. Our work over a good many years in this field is about the average of successes and failures. The successes are always very gratifying to me and the failures, sad. I do not like blindness. I shall cite at least one case each of the vacuum, purulent, and ocular types.

Vacuum Type

A female, aged 27 years, had chronic atrophic rhinitis for twenty years. Her eyes felt pushed out, and she had hard, shifting headaches. Observation showed that the postnasal region was covered with heavy crusts. When the crusts were removed, all symptoms were relieved. No pus was seen during frequent repetitions when relief was sought. This case never had any actual visual disturbance, and although observed for nearly fifteen years, no pus was seen coming from the sphenoid until two years ago following an acute rhinitis.

Purulent Type.

A female, aged 38 years, was seen in 1923. Her headaches were of a shifting nature during the past seven years. There was postnasal dropping. Observation showed some anterior ethmoid work done and pus coming from the right sphenoid. Wide open drainage was done and she has had no headache up to the present date and never any eye symptoms.

Ocular Type

The cases of this group that come under our care should put us on our best level and we should be most keen about them. The earlier we see and care for this type of patient, the better will be our results. Not all cases will be classified, but in the main, retrobulbar, choroidal, papillitic, and other closely associated lesions constitute the main complications of a spheno-postethmoidal affection.

A male, aged 26 years, was seen on October 25, 1926. He had marked papillitis up to four diopters and disk hemorrhages. All exclusions were found to be negative. Direct x-ray observation showed postethmoid-sphenoid pathology. Both regions were cleared of hyperplasia in November, 1926. In January, 1927, his eye was normal and he had had no trouble to date.

Retrobulbar Type

A male, aged 19 years, was referred to us in December, 1928. His vision was: O.D. 2½/40, O.S. 3/40. Central scotoma was almost absolute. Direct examination showed pus in both postethmoid-sphenoid regions. The x-ray reports stated that Granger's line was very indistinct and there was probable sphenoid trouble. Wide open drainage was done, and on July 13, 1929, the vision was O.D. 3½/40, O.S. 5/30÷.

A female, aged 12 years, was referred to us in 1923 because of a nasal discharge and frequent tonsillitis. Examination showed a chronic catarrhal ethmoiditis, prominent adenoids, and infected tonsils. The family physician objected to any operative measures, but later removed her tonsils and adenoids. On October 23, 1926, she was again referred for nasal advice because of a retrobulbar neuritis. All exclusions were made. The vision, with correction, was found to be 5/20 for both eyes. Wide sphenoid and postethmoid drainage was done with negative findings. On September 25, 1929, the vision with correction was 5/40 for both eyes.

A male, aged 58 years, was referred to us on April 19, 1928, for nasal care. His vision was: O.D. 1/40, O.S. 5/10. He reported that he went through the Johns Hopkins Clinic in Baltimore a month previously and no cause was found for his progressive joint trouble. On examination we found a marked right ethmoiditis, but as he had a cystic middle turbinate, we could not exclude the sphenoid, and he had an apparent dental condition in spite of x-ray and other observations at the Clinic. We had his oral condition checked and found a need of dental care. An autogenous vaccine was made from the cultures of streptococci and a rod-shaped saprophyte type taken at the oral clean-up. At about this time we cleaned the right ethmoid and went deeper into the postethmoid-sphenoid regions. He received his vaccine from the first, and on September 15, 1929, both eyes showed a 5/10 vision and his joint condition was negative. Whether the vaccine or the nose work helped, I defy any one to know.

I have been of the opinion for many years that only a small percentage of ocular pathology originated from nasal disease. If we can check a progressive process we have accomplished something, but we cannot restore destruction.

We have cases which are markedly helped, many remaining stationary, and some without help.

I know that surgery has been done without any warrant. I also know that many work in regions with which they are not familiar; hence the reports and the damage done. This does but prove the assertion that whether you have a definite pathology or not, but a syndrome of symptoms, with general exclusions, you are warranted to explore these regions. Local infections in the mouth and the throat account for most of the ocular affection, leaving but ten to fifteen per cent due to nasal causes.

Ellett's report of a step operative evisceration of the sinuses and full visual recovery means but little when the literature is full of recovered cases without any nasal attention. But think of the uncared-for cases in which nasal disease was present and the cause.

There should be no need for a commercial attitude in any case, but I am convinced that after careful exclusion one is justified in an exploratory procedure of the spheno-postethmoidal region. After writing this personal experience, I find that most of the recent writers are about agreed upon this subject. If the ophthalmologist and the otolaryngologist will work in conjunction with the internist, it would seem about the best asset that the patient could have.

813 Sassafras Street.

ABSTRACT OF DISCUSSION

G. B. JOBSON, M.D. (Franklin, Pa.): I wish to corroborate everything Dr. Heard has said on a subject which is so important to nearly all branches of medicine, and would add that as a help in diagnosis every suspected sinus case should have a visual acuity test, an examination of the fundus, and the field of vision carefully taken, especially for color. The close proximity of the optic nerves to this region render them prone to the action of toxins, if present. Especially vulnerable to toxic action is the papillo-macular bundle, disease of which is made manifest by central scotoma.

I can verify what Dr. Heard has said in regard to blocked sphenoids, as I have had similar cases. In certain instances the posterior ethmoid cells and sphenoid sinuses are so closely related to the brain anatomically that it is not unusual to have severe cerebral manifestations, as noted in a case the particulars of which I will state briefly.

A female school teacher, aged 24 years, was admitted to the Warren State Hospital with a diagnosis of psychoneurosis. She had illusions, complained of pain in the head and neck, was semiconscious, irrational, and unaware of her surroundings most of the time. Her temperature was 100.2 degrees; her pulse, was accelerated and she was extremely toxic. In a month her mental condition was greatly improved, at the end of which time she was admitted to my service at the Franklin Hospital. The nurse who accompanied her said that while en route to the State Hospital there was a sudden and profuse discharge of pus from the nose and mouth, which probably came from the sphenoid, as later developments showed, although the x-ray at the time did not verify this. An x-ray examination at the Franklin Hospital a month later disclosed a bulged sphenoidal roof and an area of density in the region of the sella. The cavities were fairly clear. The mental condition prevented an eye examination. An exploratory operation was performed, pus was found and evacuated from both cavities, which eventually got well under treatment. The patient recovered her mental and physical health in time and resumed her teaching.

FRED FISHER, M.D. (Erie, Pa.): For a number of years I have been particularly interested in sphenoid work, and five years ago at the Reading session I read a paper on sphenoid conditions with a report of two cases. Since that time that angle of the work has so increased that up to the present I have had 160 cases in which the sphenopalatine ganglia have been involved.

During the last few years I have been attempting to show some of the sphenoid structures by x-ray, and to accomplish this I use a small cassette placed in the mouth, directing the x-rays through the dome of the head; also using the Granger method. I have found that where the ordinary method might show negative findings, by placing the cassette in the mouth and directing the x-ray through the dome of the head, we sometimes get positive x-ray findings. These findings in practically all cases have been confirmed by operation, and x-rays taken later showed that the condition had cleared up. This procedure has given us much better results in our x-ray findings.

JOHN J. SULLIVAN, M.D. (Scranton, Pa.): My findings have been the same as Dr. Heard's, in every detail. I should like to ask Dr. Heard what has been his experience with external rectus paralysis in sphenoid infection.

DR. HEARD (in closing): I have never seen such a case. The only cases we have found are in mastoid infection. Dr. Fisher has had a remarkable experience in such a short time. I have been working in this field for nearly thirty-two years, and I dare say 150 cases would cover all the cases I have seen in which there was *definite* sphenoid-sinus infection. In that number of cases I would say that about 75 per cent have not shown any marked pathology. Of course, often there is pathology that is not always seen. When you are six inches away you are apt to miss something, and the thing that may look normal may not be entirely normal. Of course, with the nasal pharyngoscope we can look into the cavity, but a great majority of cases do not show marked pathology that can be typed.

Ultraviolet Solarium at Cornell

The medical adviser of Cornell University, Dr. Dean F. Smiley, has announced that all men students may come to the new ultraviolet solarium for radiation. There are two sources of ultraviolet radiation available. (1) There are 16 fifty-inch mercury tubes with aluminium reflectors, arranged in perpendicular positions around the room. To be radiated, a student proceeds between two rows of tubes, standing for one minute in front of each position. An automatic signal is given when the student is to advance to the next position. There are two overhead tubes which make it possible for the entire body to be radiated. (2) There are five carbon arc lamps arranged in a similar way.

This is claimed to be the first ultraviolet solarium There are two overhead tubes which make it possible for the entire body to be radiated. (2) There are five by the use of ultraviolet radiation.

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Editorials

REDUCTION OF MORTALITY IN ACUTE APPENDICITIS

The plan for the reduction of the mortality in acute appendicitis, as outlined in this issue of the Journal in an original article by Drs. J. O. Bower and J. H. Clark, has been endorsed by the Department of Public Health of Philadelphia, the Philadelphia County Medical Society, and the Philadelphia Association of Retail Druggists. Beginning on March 1, 1930, a concerted effort will be made by these organizations to carry out the plan. The Philadelphia County Medical Society through its chairman of the committee on publicity, Dr. F. F. Borzel, has supplied stickers to be sent to each physician in Philadelphia. Dr. A. A. Cairns, director of the Department of Public Health, has placed the official publications of the Bureau of Health at the disposal of the committee on publicity of the County Medical Society, in which articles will appear from time to time on the dangers of delay in seeking medical advice and abuse of laxatives. The stickers will be sent with these publications.

The Philadelphia Association of Retail Druggists has arranged to send to each druggist a placard containing the request as outlined relative to the giving of laxatives. During the past six months the Bureau of Health has been conducting a survey of the hospitals of Philadelphia relative to the mortality in acute appendicitis and the abuse of laxatives. This survey, while not complete, places the responsibility for the increasingly high mortality where it justly belongs —on everybody. Everybody, therefore, should coöperate to reduce it.

The family physician should consider it his duty to notify his clientele either by word of mouth or by sticker, of the dangers of delay and the use of laxatives. The hospital staff physicians should interest outside physicians in attending operations and autopsies. Finally, the surgical staffs of hospitals throughout the State, should appoint an unprejudiced member of the staff to analyze their operative results, and evaluate the methods used in the treatment of general peritonitis which is responsible for over seventy-five per cent of the fatalities. We should realize that with a decrease of the abuse of laxatives in the acute abdominal catastrophies, the mortality in acute perforation of the stomach and duodenum, acute pancreatitis, intestinal obstruction, and ectopic pregnancy will likewise be reduced. The internist as well as the surgeon and gynecologist will welcome this effort which will make for earlier diagnosis and better management.

MENTAL HYGIENE AND OBSTETRICS

The Mental Hygiene Committee of the State Medical Society, in order to be of particular help to the members, will each month carry an editorial dealing with the practical application of mental hygiene to medicine and its specialties. We open the series with mental hygiene and the obstetrician.

The obstetrician, above all others in medicine, should be familiar with the mental reactions occurring in pregnancy and the postpartum states. First, nothing influences so much the emotional tone and its reactions as conception itself. Second, grave and serious psychotic states are either associated with, or the direct result of, pregnancy and the puerperium; for example, the great group we recognize as puerperal psychoses. Third, labor, per se, as it lacerates the genital tract, must be a trauma to the nerve system, and the exhaustion following is indeed fraught with many and varied psychic reactions.

The obstetrician knows his patient from the angle of obstetrics. Many are also familiar with the so-called psychic reactions, but it is human nature to see things in the light of one's own specialty. Interpretation of psychic or more serious reactions takes the obstetrician over into the field of psychology and psychiatry.

In entering this field the psychiatrist greets you with the following suggestions: (1) Arrange for your patients a mental hygiene program as well as a physical one. (2) Chart the

psychic reactions in order to properly evalue them. (3) Differentiate the marked psychic reactions and evalue the cause. If psychogenetic, interpret and treat intelligently. (4) Protect the patient as much as possible from shock and trauma during delivery. (5) Be ever conscious of psychic reactions during pregnancy and the puerperium. If the patient fails to make adaptation, be on the look-out. Grave danger is ahead. (6) Encourage the proper mental attitude of the mother to the coming posterity and encourage her adaptation to the child and the child to her.

TO CURE OR TO PREVENT

To cure or to prevent is becoming the crucial question as to quackery and true professionalism. A majority of the newspapers of the United States are controlled by the quacks, and their editorial and advertising columns ceaselessly reiterate that the professional animus is one of monopoly and trade protection. Every pathologic circular issued in the interest of the hundred rampant medical humbugs and delusions repeats the charge with blatant and ill-spelled ignorance. Every one of these circulars and advertisements as loudly proclaims the ability of the advertiser to cure each and all of the cases of individual disease mentioned.

In view of this combination of sincere ignorance and greedy cunning, what answer can the profession make to the intelligent or semi-intelligent public? Plainly but one: The medical profession cannot be accused of selfish interest and trade motives so long as its chief aim is not alone to cure, but to prevent disease. Even the poorest of logicians can see that a large body of men devotedly and successfully laboring to prevent the very disease whose cure gives them their sole income cannot be accused of commercial motives. This, then, must be our final answer to the quack and the medical demagog. Just in so far as we are successful in proving this, just so far do the arguments of the malevolent and fanatic fall harmless at our feet—nay, even return to wound the dupes and the deceivers who fling the boomerangs.

The results of antitoxin, toxin-antitoxin, vaccination, typhoid inoculation, etc., are facts that set us apart as men utterly differing in motives from the hordes of medical humbuggery whose single appeal is their self-assertion of ability to cure individual diseases. The salvation of medicine is that it seeks with heroic unselfishness to become preventive medicine. To practice and teach this lesson is our everlasting duty. Those who do not aid in practicing it range themselves against the true profession of medicine and against the progress of humanity. If we aim only to cure, we have no telling answer to make to the quacks.

ANOTHER SPELLING DIFFICULTY—PHARMACOPŒIA

What good reason can be given for the cumbersome, common spelling of the word "Pharmacopœia?" Here we have an English word ending in a diphthong and two vowels (frequently rendered with four separate vowels, however), but only two sounds are made out of them. It is true that the Greek is "Pharmakapolia," but poi-yah is understandable, while pe-ah for pœia is not. Dictionaries go one step to the good and spell the word "Pharmacopeia," and pronounce it far-mak-o-pe-ah, but even this spelling does not truly fit the pronunciation. Our English ancestors seem to have had no great difficulty in deriving poem, poet, etc., from the same origin —the Greek *poiein;* therefore, what necessity of lexicography requires any spelling but "Pharmacopea" whose pronunciation would be self-evident, whose etymology would be found in the dictionary, the same as that of poet is now, and whose spelling would be really comprehensible to an English-speaking individual.

The sole objection to adopting the suggestion is that a few objectors would raise a fuss. Logic has nothing whatever to do with English spelling or pronunciation, and nobody cares less for etymology than the pernickety sticklers who talk and make much of it. We remember an amusing correspondence with one such who was apparently deeply grieved because one poor editor omitted diereses and hyphens in spelling zoölogy, coöperation, intra-uterine, etc. But in the very letter of the critic he spelled dieresis without the precious dots or hyphen, and this word pharmacopœia should have been adduced as an additional instance. A still more striking one would have been such words as diiodid, diiodoform, which would require a very pepper-box of dots to satisfy demands. Diacritic marks of all kinds are against the genius of our language and people; they should, and will, be abolished. The only reason we fear to recommend pharmacopea is that every rival, envier, and hater, on other than etymologic grounds, will seize the occasion to belabor and write scornful letters and editorials green with rage.

MENTAL HYGIENE—ITS TWENTIETH ANNIVERSARY

The closing year (in November) brought the twentieth anniversary of the National Mental

Hygiene Committee, an organization brought about through the efforts of Clifford W. Beers whose name will always be linked with the mental-hygiene movements of communities, states, and nations. Exercises appropriate to the occasion were held at the Hotel Savoy in New York.

Pennsylvania's Mental Hygiene Committee bears a close relation to the parent body. As a movement in Pennsylvania, mental hygiene received its first impetus under the leadership of Dr. E. Stanley Abbott and no doubt the efforts put forth at that time were a part of the general movement of the National Committee to hasten state organization throughout the United States. The state committee has always been and is still identified with the Public Charities Association. After its organization, there was inactivity until a few years ago when through the efforts of Dr. D. J. McCarthy, working in conjunction with the Public Charities Association, there was brought about the present effective Mental Hygiene Division of the Public Charities Association.

This editorial deals not so much with the celebration of the twentieth anniversary of the Mental Hygiene Committee, nor yet with its accomplishments; but aims to call attention to a present apparent lack of relationship of mental hygiene in Pennsylvania to the national body; that is, lack of recognition by the national body of the great work done in Pennsylvania and of the men putting on the program. Pennsylvania cannot be accused of failing to give recognition to the National Committee, for certain agencies (state and civic) have turned to the parent body for expert advice and counsel, pertaining to surveys, etc.

Readers of the brochure presented at the national dinner, in lieu of the foregoing, can readily appreciate this lack of recognition of Pennsylvania men and their work. In reviewing pamphlets printed for distribution by the committee one observes Pennsylvania's contribution to mental hygiene as somewhat lacking. Further, in the appointment of the committee on arrangements for the international meeting, Pennsylvania, with practically ten million people, has a list of about six representatives, a list most conspicuous by the absence of a representative from among the superintendents of the state mental hospital system, from among our clinical directors, and from the heads of our colleges and universities. We also find only one medical school represented. One will watch with interest the program of the Congress for Pennsylvania's recognition.

It is no secret in Pennsylvania that the relationship between the national body and the Pennsylvania mental-hygiene workers is in a position to become somewhat strained. Such should not be the case, however, and so far as the men in Pennsylvania are concerned there will be none, so long as Clifford Beers lives. In justice to these men and Mr. Beers, those executives in the National Committee largely responsible for such facts as noted above should realize that so far as mental hygiene is concerned, Pennsylvania feels that the sun does not rise and set in that small strip of land extending from Boston, through Connecticut, to the southern border of New York. Such a restriction was far from the thoughts of Clifford W. Beers, its founder. Furthermore, mental hygiene to become useful requires more than speakers and propaganda. It must be practically applied. Where can you find a state in which it is as widely, comprehensively, and practically applied as in Pennsylvania? Unfortunately the National Committee has failed to see it. In conclusion we find that we are not Freudians. A perusal of the brochure, furthermore, proves our sentiments in regard to recognition and not a complex.

LONGEVITY IN LUNATICS

From time to time publicity appears as to the longevity of lunatics. The *Lancet* published the account of an inmate of Broadmoor State Asylum whose history furnished an interesting commentary on the above subject and has a bearing on the economic question of the housing, care and treatment (and incidentally the expense which must of necessity accrue therefrom), and longevity of certain lunatics.

John Quier attempted to commit murder and was sent to jail in 1843 at the age of twenty-nine years. He was then found to be insane and was sent to Bedlam where he was detained until 1865—a period of twenty-one years. Broadmoor Asylum being then opened, he was transferred there and remained an inmate until his death in 1899. During his long confinement of fifty-five years, Quier, it is said, showed no tendency to violence. He was a quiet, inoffensive, weak-minded man, generally engaged in doing odd jobs. He died at the age of eighty-four years, the cause of death being given as senile decay.

Dr. Blandford mentions the following facts on longevity: "In a small asylum for the upper classes I have under my care at the present time (December, 1896) twenty-four female patients. Of these, four are upwards of eighty years of age; one has been an inmate of the asylum fifty-two years, one forty-nine years. Three are upwards of seventy years, and they have been patients in the same house fifty, forty-

five, and forty-four years." The records of other county and private asylums, especially the older ones, contain several similar cases of longevity. The economic and financial data, if available, ought to prove highly interesting.

JOTS AND TITTLES

Science and Research

McGill University has announced the discovery of one of the powerful hormones which regulate human health. This new hormone is claimed to influence the general health and metabolism of women. The discovery is credited to Dr. James Bertram Collip who was associated with Dr. F. G. Banting, the discoverer of insulin.

Discovery by two San Francisco surgeons of what they call a "cancer-killing serum" was disclosed January 20, when it became known that medical agencies of the University of California have decided to coöperate in further experiments with the substance. The originators, Dr. Walter Bernard Coffey, chief surgeon of the Southern Pacific Hospital at San Francisco, and Dr. John D. Humber, his colleague, specified that the serum was not to be regarded as a cancer cure, but asserted that it was able to kill cancerous tissues. The serum is derived from the outer layer of the adrenal glands of sheep and was asserted by its discoverers to have the power, when injected into the human body, of "destroying the tissues of the malignant areas." The scientists who investigated the experiments reported further research would be necessary to discover the types of cancer and the stages of the disease in which the serum would be most effective.

Because of the deaths which have occurred and the seeming hopelessness of the condition of the living victims, it is with great interest that the apparently favorable effects of a new treatment for radium poisoning is announced. The report is made by Johns Hopkins University. The treatment, suggested by the work of J. C. Aub and his coworkers, consists in administering Collip's parathyroid extract. Three young women who worked with radioactive paint before its danger was realized, were treated with Collip's parathyroid extract and it was found that they lost about fifty per cent of their radioactivity. In each case there was improvement in the general condition and gain in weight.

The use of the "teletactor" by a deaf person, who simultaneously watches the lips of a speaker, gives him a thirty-per-cent advantage over another who receives communications only by "straight" lip reading. This was the statement made by Dr. Robert H. Gault, director of the vibro-tactile research laboratory at Northwestern University, Chicago, and inventor of the "teletactor," a device which enables the deaf to "hear" through their finger tips, in an address before the Franklin Institute, Philadelphia. The "teletactor," Dr. Gault explained, conveys words to those cut off from the world of sound through their tactual sense. Small reeds resting against the four fingers and thumb vibrate with varying intensity and frequency in response to vocal sound waves sent into the mouthpiece of the instrument by the human voice. "I have tested the hypothesis that the sense of touch catches some forms of speech that cannot be laid hold of by the eye alone observing a speaker's face, and that this organ may serve as auxiliary to the eye in those cases in which hearing is lacking," Dr. Gault said. "Evidently some characteristics of speech are discriminated more successfully through the skin than through the eye. One of these characteristics deals with 'homophenous' words, that is words that look alike on the face of the speaker —'bead,' 'peat,' and 'meat' are examples—but they feel very unalike through the 'teletactor' system."

Dr. D. A. Wells, of the University of Cincinnati, has found that electrons at as low a pressure as thirty volts will destroy staphylococcus albus. These electrons move at a speed of a few miles a second. It has been known for some time that electrons driven at a high speed by a potential difference of several thousand volts have a germ-killing effect. Apparently, increasing the energy of the electrons, increases this effect.

A restless cancer patient in Beth Israel Hospital, New York City, in January, tore off one of his dressings and unwittingly threw 70 mg. of radium into a trash receptacle. Hours later, after attendants had searched the hospital from top to bottom, the radium was found in an incinerator. It was located by the director of physics of the hospital, who used an electroscope to aid him in his search.

Statistically speaking, there is only about four-fifths of one physician for every 1000 men, women, and children in the United States. According to a recent government survey, 149,521 doctors now are practicing among the 118,127,645 of this country's population. As the area of the United States is, roughly, three million square miles, this would mean that there is one doctor for every twenty square miles. Because the vast majority of physicians are established in the large cities, however, these figures are deceiving. The complaint from rural sections that country practitioners are getting scarcer is borne out by the data of the survey, in the course of which it was found that Washington, D. C., for example, has more physicians in proportion to its area and population than any other part of the United States.

Physicians are trying to make use of the antispasmodic action of ether to reduce the intensity of the paroxysms of whooping cough. At a meeting of the Southern Medical Association, Dr. W. Ambrose McGee of Richmond, Va., reported on the results obtained with this new method of treating whooping cough.

The A. M. A. Committee on Foods

On page 415 of the *Journal of the A. M. A.*, for February 8, 1930, is an editorial calling attention to the first acceptances by the Committee on Foods, which appear on page 411 of the same issue. The preparations listed are products that "have been accepted as conforming to the rules of the Committee on Foods of the Council on Pharmacy and Chemistry of the American Medical Association. These products are approved for advertising in the publications of the American Medical Association, and for general promulgation to the public."

The seal of the committee, which states that the product has been accepted by the American Medical Association, may be used by manufacturers on packages and in advertising.

We congratulate the American Medical Association upon this new field of endeavor, the activities of which "will give stability to a rapidly growing industry and prevent the sinking of the modern food market in a morass of hokum such as engulfed the drug industry in its developing stages."

Our members are advised to look for the seal on food products. The committee has held up many of the products submitted, "as the claims were exagger-

ated, and the manufacturers were asked to withdraw such claims or to modify them in order to make the products suitable."

Clergymen Must Be Doctors

According to an Associated Press article, what used to be sinfulness may now be merely tonsilitis, Dean Shailer Matthews, of the Divinity School of the University of Chicago, recently stated. The announcement of this change in the trend of ministerial training was made by Dean Matthews at the opening of a course of lectures sponsored by the school and delivered by noted exponents of the theory of psychiatry in religion.

The minister of the future, Dean Matthews believes, must fill something of the place of the country doctor, or the general practitioner of medicine. He must give over "scaring people" into being good, and substitute for threats of hellfire an intelligent knowledge of what is psychologically or pathologically wrong with his parishioner-patient, so that the patient may be sent to the proper specialist for cure.

"It amounts to the establishment of clinics of specialists in connection with the ministry," Dean Matthews explained. "Religious workers can do and have done a great deal of wrong by using wrong psychological methods. It seems wrong to me, for instance, to frighten people with threats of hell when their 'sinfulness' may only be a case of bad tonsils." Dean Matthews added that if the curing of sick souls is the purpose of religion, the minister must have some scientific knowledge of how sick minds and sick bodies create sickness in the soul. This theory, he said, will be adopted in the courses of the University Divinity School.

The materialist is now old-fashioned, Dean Matthews declared, because the physicist has cast doubts upon the authenticity of matter. Religion, he said, evolves with life, and the scriptural admonition about the offending right eye should now be "if thy tonsils offend thee, cut them out."

Cancer Research at the University of Pennsylvania

An anonymous gift of $210,000 to the Cancer Research Fund of the Graduate School of Medicine, University of Pennsylvania—the largest single contribution ever made to the fund—was announced January 25 by Dr. Josiah H. Penniman, provost of the University. Several notable additions to the research staff have already been made possible by the gift and the work which is being carried on by the fund has been reorganized on a more comprehensive basis. Under the terms of the gift, the fund, established in 1928 through a gift made by Irene duPont, will receive $70,000 annually over a period of three years.

Dr. Penniman declared that it has been realized for some time that progress in cancer research work depends upon the association of the physician, the biologist, and the chemist, and upon the close coöperation of related clinics and laboratories.

Dr. Penniman explained: "One joint research project has been undertaken in association with the Bartol Research Foundation of the Franklin Institute, which is one of the great physical research institutes of the country, while we have also arranged for research work in association with the American Oncologic Hospital, a cancer hospital at 33rd Street and Powelton Avenue. Plans are being developed for the equipment of a new clinic for modern diagnosis and treatment of tumors in the American Oncologic Hospital, and Dr. George M. Dorrance, professor of maxillofacial surgery in the school of dentistry of the University has been appointed chief of the clinic.

"Central laboratories of the Cancer Research Fund have been established at 133 South Thirty-sixth Street, and here a complete tissue culture department is under the direction of Dr. Clarence E. McClung, professor of zoölogy at the University of Pennsylvania, and Prof. David H. Tennent, of the department of zoölogy of Bryn Mawr College."

Prof. J. P. M. Vogelaar, of the University of Leyden, Holland, and Dr. Raymond C. Parker, recently connected with the Kaiser Wilhelm Institute of Biology in Berlin, also have been added to the staff of the tissue culture department. Eight other research workers will be maintained in this department. The central laboratories also have an experimental animal cancer department under the immediate direction of Dr. Shigemitsu Itami, who has had ten years' experience at the Crocker Cancer Institute in New York, and four years with the British Empire Cancer Campaign in London, and who is assisted by a chemist and zoölogist.

Research work in radiation and other physical aspects of cancer is being carried on in the central laboratories in collaboration with the Bartol Institute, and for this purpose the Cancer Research Fund is maintaining two physicists, two chemists, and a scientific secretary.

At the Philadelphia General Hospital the Cancer Research Fund has had for some time a research laboratory for the study of biochemistry of the blood before and after radiation of patients, and for the study of the hematology and immunology of cancer. This laboratory works in conjunction with the cancer clinic of the Philadelphia General Hospital, and has a staff of three chemists, one immunologist, one physician, and one voluntary worker.

In addition to maintaining the laboratories mentioned, the Cancer Research Fund has made a number of grants for investigation to be carried on by research workers in collaboration with the work of the fund.

Dangers of Sport

Much has appeared in the public press in regard to the subject of high-school sports, some writers stressing what they consider the abuses and injuries of school athletic activities, while others assert that major injuries are rare, especially in high-school athletic sports. It would seem that many schools conduct athletic activities without a single major injury as statistics throughout the entire United States during the year appear to show only about eighteen injuries.

Dr. J. M. Anders of Philadelphia in a letter to the editor of the *Public Ledger,* December 12, states that in his opinion the most serious consequences of competitive sports occur among rapidly growing boys and girls, under seventeen years of age, from undue strain of the heart and the large blood vessels leading therefrom, and this form of injury lays the foundation for the development of lesions later on which are progressive and incurable. Dr. Anders considers the view herewith expressed is in harmony with the teaching of physiology and hygiene, that sudden great strain thrown upon the cardiovascular system in the young is prone to produce permanently injurious consequences. This has been confirmed by leading clinicians, hence the age of the boy or girl in determining whether or not competitive sports are to be recommended is one of prime importance.

The United States Supreme Court

The retirement of Chief Justice William Howard Taft brought about a dramatic episode without a paral-

lel in our history. There was much discussion about the reorganization of this great tribunal, as three of the justices are now eligible for retirement, and two more will be eligible for retirement in two years.

The oldest member of the Supreme Court, both in years and seniority of service, is Associate Justice Oliver Wendell Holmes, son of the noted poet, essayist philosopher, and physician. Justice Holmes was a Civil War soldier who was badly wounded in action. Although he is eighty-eight years old, he continues to perform his heavy judicial duties with unswerving devotion. He believes that the decrease in his activities which would come from retirement would mean physical deterioration and would hasten the end of his life. Associate Justice Holmes is reiterating a state of affairs well known to the medical profession and employers, but it is with particular significance when one considers the source of the opinion.

Neglected Danger Warning

Dr. Charles E. Monroe, chief explosive chemist of the United States Bureau of Mines, recently issued a statement that notwithstanding the universal focusing of attention upon the causes of the Cleveland Clinic disaster, only about eight months ago, that proper precautions are still not being universally taken in the storage of nitrocellulose films. This is a scathing indictment of national carelessness.

Five accidents, all resulting in heavy property damage and some in fatalities, that have occurred in different parts of the country owing to neglect of the Cleveland lesson, are cited by Dr. Monroe. He states that twenty years have elapsed since the dangerous properties of nitrocellulose films were exhibited in a great calamity and investigated thoroughly. Hence there is no excuse for ignorance or neglect.

Again let us emphasize that film which ignites at a very low temperature, which may be ignited by spontaneous dissolution, which burns flamelessly and in so doing may deal out death either by explosion or by the generation of poisonous fumes, or both, should be stored with the greatest precaution.

This JOURNAL has called the attention of its readers to the safety regulations drafted by the National Fire Protection Association, and which are available to all owners of such film and to all municipal authorities. Indeed, these regulations should be incorporated in legislation and rigidly enforced. Neglect resulting in fatality, in view of our present knowledge, cannot be considered other than homicidal.

HOSPITAL ACTIVITIES

The Patient's Record—*Continued*

The *personal history* of the patient is a very important record, and too frequently is so abbreviated as to render it useless. The excuse given by the intern is that the chief never reads the history, therefore, why waste time on it. It should be written as soon as possible after the admission of the patient; never later than twenty-four hours. If the patient is unconscious, the physical findings duly recorded must be accepted in lieu thereof, until the patient regains consciousness, or relatives or friends supply the facts known to them. The same principle applies to patients who do not speak English. As a rule in the first group the intern will write across the record "Unconscious," and in the second group "Does not speak English," as though this finally disposed of it.

Care should be exercised in properly recording the diagnoses, both working and final. If there are two of the same thing, i. e., arm, leg, foot, etc., specify whether right or left. If a fracture or dislocation, specify the structures involved. How often do you see records stating "fracture," or "dislocation," or "fractured arm," or "dislocated leg," or "cancer of the breast," or "amputation of finger," etc. Again, we see recorded, "pneumonia," omitting the type and which lung, and so on, ad infinitum.

The chief, or the referring physician, frequently can supply valuable additions to the personal history, if they would only manifest the proper interest in the patient's record. When the patient is seen in consultation by the chief, previous to the admission of the patient to the hospital, a notation should be dictated by the chief stating such data obtained at that time as will be of direct value. This obtains more frequently in surgical than in medical cases.

On this sheet should appear, first, the final diagnosis to be filled in on the day of discharge of the patient. It should contain in full the diagnoses made. Very often, if there is a syphilitic infection, there will be no record made of it in the final diagnosis.

In recording final diagnosis, bear in mind that the records will be cross-indexed, so that they will be of subsequent value for study, statistical and otherwise.

The *chief complaint* should be carefully elicited, and recorded as nearly as possible in the exact words of the patient. This often is more expressive than a corrected version made by the person taking the history, especially if the latter is inexperienced in history taking. All the chief complaints should be recorded. It is amusing to see under chief complaint, "patient had a fall," "came in on account of hemorrhage," "knocked down by an automobile," "injured in a fight," without any qualifying statement. In recording the chief complaint it is essential to include the date, mode of onset, and probable cause and course.

The name, address, case number, room number, ward, date of admission, age, sex, race, social status, occupation, and date of discharge should be on this sheet.

It is customary to make a record of the results of treatment, whether cured, improved, unimproved, or died. The decision as to the result of treatment must be that of the chief. Too often the intern uses his own judgment. We recall an intern who recorded "improved" for all patients discharged from his service, and about three weeks elapsed before the record room checked the sameness of all patients discharged from that department of the hospital. He stated that the previous intern on the service advised him that it was the customary procedure on that service, which was untrue. Here is an instance where the chief or his assistant, in finally approving the charts, had overlooked this particular part of the record.

In some instances it is very difficult to know how to record properly the results of treatment, for instance, dilatation and curettage of the uterus for dysmenorrhea and sterility. The patient recovers from the operation, hence is recorded cured, but is she cured of the symptoms as of chief complaint? This can be determined only by a follow-up system. Hence, for the proper care of patients, all hospitals should have an obligatory, efficient follow-up system.

In all deaths every effort should be made to secure an autopsy.

The *present condition* should be well taken, and properly developed, giving careful attention to details. Much tact will be required to do justice to this part of

history taking, more especially when dealing with private patients.

The *past history* often is very valuable, and should always include the diseases from childhood to date, habits, and social data.

The *family history* should afford information as to those living (state of health), and those who are dead (giving the cause).

Former or subsequent admissions to this or any other hospital, with the dates, should be recorded. The name and address of other hospitals should be given to facilitate correspondence.

The *summary* should be tabulated in orderly sequence. There should be a line at the lower portion of the personal-history sheet for the signature of the chief and the intern. As far as the hospitals of Pennsylvania are concerned, it is a requirement of the State Board of Medical Education and Licensure that the intern and chief shall sign the personal-history sheet and the physical-examination record.

What Information Should a Hospital Give Out About a Patient, and Who Should Furnish It?—In most institutions the telephone operator or, in larger hospitals, an information clerk is continually questioned about the condition of patients. Since these requests are not made in person, the representative of the hospital is unable to interpret whether the information desired is to the best interests of the patient or his family. The family sometimes desires that the presence of its relative in the hospital be unknown to the public generally. This is particularly true of persons who are prominent in public or professional life.

Sometimes diagnoses are requested and these should always be refused when the request is made over the telephone. The results of such laboratory procedures as the Wassermann reaction or certain specific agglutination tests are the property of the hospital and should not be divulged to anyone except on request or permission from the family. When dissension exists in a family, requests from the members of the family should go unrecognized. Grounds for divorce or other such proceedings have sometimes been ascribed to information which has been secured in a not straightforward way.

When accident or criminal cases are admitted to the institution, the police often desire that no information shall be given out by the hospital until the officers of the law have had an opportunity to investigate the circumstances surrounding the case. Such a request from the police department should certainly be honored.

Frequently the hospital has difficulty in pacifying overzealous reporters who are bent upon securing, in any way possible, information for use in the preparation of news material. It has been the unfortunate experience of some institutions that if information concerning certain intra- and extra-hospital events is denied the press, unscrupulous reporters will prepare an article founded upon half or entirely false facts which places the hospital in an embarrassing light. High-grade and ethical reporters and papers frown upon such procedures. At times, the motives of the hospital being misunderstood, the institution is deliberately embarrassed as a sort of punishment for refusing to give out facts.

There can and should be but one person in the institution who is authorized to furnish information concerning such hospital matters. This person should be the superintendent or someone representing him. The dissemination of information relative to the condition of patients is best left to an individual who is skilled in handling these matters. Interns and nurses should be forbidden to communicate with the press information concerning the patients admitted to the hospital or any details of such cases. At times, physicians treating private patients in the hospital are approached for information relative to their condition. This is a difficult angle of the problem to handle, but certainly no information should be given out except that which is approved by the family.

A healthy, understanding relationship should be developed between the hospital and the local community papers. The press can do much for the hospital, and the hospital in turn can furnish not a little interesting material that the public will appreciate. The press, however, should understand that there are certain restrictions upon the type of information that the hospital can and will divulge and should respect this fact. The hospital, in appreciation of an understanding attitude on the part of the press, should furnish, freely and accurately, information of the proper sort. The keynote of successful control of this condition is for the dissemination of information to be centralized in one person. Matters of policy and news concerning unusual happenings or of outstanding personages who patronize the hospital should be handled by the superintendent only.—*Modern Hospital.*

What Is the Most Efficient Way of Administering Oxygen to a Pneumonia Patient?—The hospital buys oxygen in tanks of various size and of high or low pressure. For use in combination with nitrous oxid in the surgical clinic, oxygen in somewhat different capacity tanks and pressure is purchased, as compared with that employed in the medical and surgical wards for the administration to patients showing cyanosis.

The custom in most institutions is to use a 100-gallon low pressure tank for the latter purpose, with a water bottle and sufficient hose to render the transmission to the patient convenient. For the actual administration to the patient, a small-sized catheter or nasal tube is usually employed or else a cone of small proportions is simply held over the patient's nose and mouth. This latter method of administering oxygen is inefficient and is often annoying to the patient. By the cone method, the patient inhales but a small percentage of the oxygen used. The administration of this gas is usually of short duration because of the necessity for some person to stand at the patient's bedside to hold the cone. The catheter or nasal-tube method is somewhat more efficient but at its best unsatisfactory.

There have been developed in the last half decade a variety of apparatus for the administration of oxygen. Beginning with an oxygen room into which gas, generated nearby, is poured at a regulated concentration, this procedure has so developed that there are on the market several satisfactory portable and relatively inexpensive machines for the constant administration of oxygen. The oxygen room has been fairly satisfactory but is of little use to most institutions because of the expense in its construction, and also because of the relatively small proportion of time it is in use during the year. Instead of placing the patient's bed within an oxygen atmosphere, it has been found practicable to construct an oxygen hood which fits so tightly about the patient's head and shoulders that little of the gas escapes. To this principle have been added such refinements as a rebreathing process with the separation of the carbon dioxid gas from the contaminated oxygen air by the use of lime salts.

Certain forms of apparatus have also taken advantage of the principle of the salubrious effect of cold air upon

the pneumonia patient, and have forced, by means of a small electric fan, the purified air with its added oxygen content through a chamber of ice. In the hands of one who understands the functioning of such an apparatus, a pneumonia patient can be kept for a number of days in an oxygen concentration of about 45 per cent, and at the same time, be free from any sense of constriction or suffocation because of the presence of the tent. Such apparatus is certainly life-saving and has many advantages over the tank, bottle, and tube apparatus, or even over that which employs a mask similar to the one commonly seen on the gas machines. It is possible to use a commercial oxygen in the apparatus described, and the cost averages about $2.50 to $3 per 1,300 gallons. Such an apparatus employing 40-per-cent concentration and using two to three liters per minute will last, dependent somewhat upon the accuracy with which the flow is gauged, from twenty to twenty-six hours. The effect upon a toxic cyanotic pneumonia patient of the exemplification of the foregoing principle is dramatic. The lips and countenance become pink and the patient experiences a feeling of well-being.—*Modern Hospital.*

PHYSICAL THERAPY

Prescribing Massage

Many physicians have occasion to prescribe massage for their patients. As a rule, they prescribe just "massage," and leave it to the masseur or masseuse to decide the type of massage to be given.

The physician should remember that almost diametrically opposite effects may be obtained in giving massage. The pulse may be slowed or hastened. The peripheral nerves may be soothed or stimulated. Blood pressure may be reduced or increased. If, therefore, he prescribes just massage, he will give his technician little aid in deciding the type of treatment to be used, and he will have left to a nonmedical individual a medical decision which should have been his own.

If the physician will keep in mind the five cardinal methods of massage and their physiologic effects, he will have little difficulty in prescribing massage intelligently. They are as follows:

(1) Effleurage, long, centripetal stroking. Sedative; hurries lymphatic and venous circulation.

(2) Pétrissage, kneading. Stimulating to muscles; promotes absorption and overcomes stasis.

(3) Friction, deep, rapid, circular rubbing. Relieves deep congestion and stimulates circulation.

(4) Tapotement, hacking or slapping. Tonic to nerves, muscles, and skin; and stimulates circulation.

(5) Vibration, given with finger tips in tremulous manner. Stimulating or sedative, depending on force with which it is given.

With these points in mind, he may prescribe—gentle effleurage or rapid petrissage; local tapotement; sedative vibration; or a combination of these.

If the physician remembers nothing else about massage, he should remember at least to prescribe *sedative* massage or *stimulating* massage, rather than just massage.

The Progress of Physical Therapy

Only five years ago, one rarely saw a reference to the treatment of disease by means of physical agents. Material for a column on this subject would have been difficult to obtain. Today, one can scarcely pick up a journal without finding some reference to physical therapy. The editor's task is merely to choose the most interesting excerpts.

The writer was particularly interested in "The Medical Progress Number" of *The Medical Times,* for January, 1930. In this number, various authorities in diverse branches of medicine wrote on the advances in their chosen fields.

In the article on "Progress of Medicine in 1929," Thewlis referred to "a new apparatus for diathermic application of heat" and to "ultraviolet therapy for tuberculosis of the middle ear."

In the article on "Progress in Surgery during 1929," Heineck alluded to the "rapid strides" being made by electrosurgery and stated that its advantages were "becoming more manifest."

Pedersen, in his article on "Urology in 1929," mentioned the high value of ultraviolet light in the treatment of urogenital tuberculosis.

Ayres, et al., refer, in the article on "Progress in Diseases of Nose, Throat, and Ear," to the use of physical therapy in "facial paralysis with acute otitis media."

In the final article, "Recent Progress in Pediatrics," Stringfield directs attention to the treatment of rickets by means of "Irradiated Ergosterol" (ergosterol which has been exposed to ultraviolet light).

Where could one find a more striking illustration of the progress of physical therapy.

Although in physical therapy—a prodigiously interesting field of medicine—we have as yet only scratched the surface, as far as its uses are concerned, it is indeed pleasing to find that specialists in practically every branch of medical endeavor are finding uses for it. The physical therapist can serve nearly every medical specialty.

One of the recent developments is the induction of labor by means of the sinusoidal current. Since the current is entirely under the control of the operator, and since there is no danger of intrauterine infection, it offers definite advantages over the use of drugs or the hydrostatic bag. Thus, new uses for physical therapy are constantly being revealed.

With the rapidly growing interest in physical therapy, we can confidently predict startling advances in the next few years.

Light in the Treatment of Disease

Light has a beneficial effect in certain diseases. Some diseases respond to light treatment more readily than others. The response also depends upon the severity of the disease, the state of immunity, and the personal idiosyncrasies. Light has been used with benefit in certain forms of anemia; in the treatment of diseases due to faulty assimilation; in the deficiency diseases due to lack of vitamins; in tuberculosis of bone, joints, and glands; for the cure of local conditions such as wounds and ulcers; and for the relief of deep-seated congestion, neuritis, and certain skin diseases. Light is of value in the cure and prevention of rickets; it promotes growth; and it is of value in restoring tone and function during convalescence from severe infection.

Since the amount of natural light from the sun, and especially its ultraviolet-ray content, varies with the geographical location, the season, and such local conditions as the amount of dust, smoke, and moisture in the atmosphere, reliance may be placed on sources of artificial radiation. These sources are generally called lamps, or radiators.

There are three types of lamps used for the produc-

tion of artificial light for therapeutic purposes: (1) those that emit heat, light, and ultraviolet rays in approximately the same proportion as sunlight; (2) those in which ultraviolet rays predominate; and (3) those that emit light and heat, but little ultraviolet light. A portable instrument, which measures the intensity of the ultraviolet rays, has been invented.

A lamp that is useful for one purpose might not be useful for another, and indeed might have a harmful effect. A person without medical training should not select and use a lamp at random, but before purchasing and using a lamp should consult his physician. If these lamps are to be used in the treatment of any disease, or over long continued periods of exposure, one should have the advice of a competent physician.

INDUSTRIAL MEDICINE

Shall the Hospital do Charity Work for the State Industrial Groups?—In an attempt to get the industrial insurance commissions of Washington and Oregon to increase the rates they pay for state patients in the hospitals to a level at least commensurate with the average cost of services, a resolution to this effect was passed at the meeting of the Western Hospital Association, Portland, Ore. In the discussion that preceded the drafting of the resolution, it was pointed out that ten years ago the state industrial department of Washington was paying $2.57 a day or $18 a week for the hospitalization of state patients, less $2 a week for medicines and special dressing which were deducted, if the patient had had medicine and special dressings to that amount. This left the hospital $16 a week. The hospital rates are still the same as they were ten years ago; but, it was pointed out, the pay roll is not the same as it was ten years ago.

C. J. Cummings, superintendent of the Tacoma General Hospital, Tacoma, Wash., said his hospital had not taken such cases for three years and would not take them for three years more, if conditions remain as they are.

Other representatives agreed that it was impossible for any hospital to give up-to-date service for $2.57 a day and that the state commissions should be urged to increase the rate at least to cover the cost. All deplored that the hospitals were expected to do charity work for the state.

Examples of other states were cited, chiefly Ohio and Oklahoma. Ohio pays $7 a day for its hospitalization cases and Oklahoma, $5.—*Modern Hospital.*

New York Recommends Improvement in Treatment of Injured Employees.—A committee appointed by the N. Y. industrial commissioner to study all forms of medical service rendered injured employees under the state Workmen's Compensation Act, has submitted a report recommending that legislation be enacted to restrict the treatment of injured employees to specially registered physicians, nurses, physical therapists, etc., and that all clinics be registered and attended at all times by a licensed physician. This recommendation was made after the committee had made a personal inspection of several clinics in New York City, including some of each of the three principal types, those operated by insurance carriers, those operated by large medical service agencies, and those operated by individual physicians.

The committee contemplates a further study on the problem of securing for employees the benefit of the best judgment of an impartial physician who owes allegiance to no one.

Respiratory Diseases Chief Sources of Illnesses Among Workers.—In a study made by the Public Health Service it was disclosed that respiratory diseases account for 42.4 per cent of the total cases of illnesses among industrial workers and were the leading cause of morbidity. This was concluded after studying the memberships of about thirty-five industrial sick-benefit associations and company relief departments for the years 1921 to 1928, inclusive.

Alcohol Deaths Increase Among Wage Earners.—According to information compiled by the Metropolitan Life Insurance Company and made available on February 13 by the Department of Commerce, the alcoholism death rate among wage earners during the past eight years has been six times so great in the United States as in Canada.

Increase in Industrial Accidents.—In the annual report of the director of the State Bureau of Workmen's Compensation, an increase of 9.3 per cent in the number of industrial accidents reported in Pennsylvania in 1929 and an increase of 7 per cent in compensation liability as compared with 1928, were reported. It should be remembered that the industrial activity of 1929 as compared with that of 1928 was much greater and the increase in the number of accidents reported was the result of the increase in employment.

Misuse of Self-insurance Plan.—Since an employer discharged forty-two men because they had incipient hernia, there may be a change in the California law. The state director of industrial relations states that if self-insurance under the Workmen's Compensation Act is to be used to lay off workmen because of their physical defects which might result in compensable disability, the problem will probably be considered in future legislation.

MEDICOLEGAL NOTES

Hospital Wins Suit Involving Nurse's Negligence

That a nurse may be guilty of negligence in her treatment of a patient and not always guilty of his death, though it immediately follows, was indicated in a recent decision handed down by Judge M. M. Logan of the Kentucky Court of Appeals, and reviewed in the Kentucky state journal.

W. B. Hicks underwent an operation at the Harlan Hospital, Harlan, Ky., in March, 1928. The surgeon who performed the operation told the head nurse to keep the patient's mouth closed by raising the lower jaw, otherwise he would die of strangulation. The head nurse instructed a second nurse to that effect, and the second nurse instructed a third nurse who relieved her later at Hick's bedside. The patient died, apparently of strangulation, and the estate sued the hospital. The hospital's attorneys held that Hick's died from other causes. The circuit court of Harlan decided for the hospital, and the case was carried to the court of appeals.

Judge Logan held that an accident following acts of negligence cannot always be blamed on the person guilty of the negligence. "The hospital was well within its rights in attempting to establish that the negligence of the nurse, if any, did not occasion the death of Hicks," Judge Logan wrote. "As it introduced proof to this effect, it was a question for the jury to determine

whether the nurse was negligent, and if the jury did determine that the nurse was negligent, it was necessary for it to determine whether the negligence of the nurse caused the death of Hicks."—*Modern Hospital.*

Specific Injury Defined by Law.—The State Workmen's Compensation Board has given the opinion recently that the hernia amendment to the law, approved Apr. 13, 1927, should not be strictly and literally applied to every form of hernia. The law did not contemplate the various forms of hernia recognized by the medical profession—as hernia of the brain, of the eye, or of the lung.

Death Caused by Infection following Extraction of Tooth is Ruled Accidental.—The Supreme Court of Texas holds that death resulting from streptococcic poisoning following the extraction of a wisdom tooth, is caused "solely and exclusively by external, violent, and accidental means." The opinion of the court declares that the entrance of the infection into the lacerated tissues at the time and under the circumstances was an unusual and unexpected thing and must be regarded as much of an accident as any other act within the usual meaning of the word. The rule hence becomes applicable, it added, that when the vis major is so connected with the means employed, as to be a part and parcel of what would otherwise have been a voluntary act, then the means employed, though employed voluntarily, take color from the unknown and fatal factor and become accidental.

Standard of Blindness.—In a report from the Health Organization of the League of Nations, it is recommended that a general standard of blindness throughout the world be adopted. The recommendation is included in a study of the welfare of the blind in twenty-six countries.

The report states that when the administrators have determined for what purposes the definitions are needed, the definitions themselves might be drawn up in relation to the medical facts in a uniform way through some pronouncement by an international body of eye specialists meeting in conference. When administrative action for the welfare of the blind is in question, it is necessary to define blindness with some regard to the disability of the blind person in certain defined respects.

Difficulties are encountered in attempting to obtain a total figure for the blind population of the world. Since no general agreement prevails as to the exact condition which constitutes blindness, only a rough estimate can be made.

PUBLIC HEALTH

Statement by the State Secretary of Health.—Recently Doctor Theodore B. Appel issued the following statement regarding the work of the department during 1929 and the general condition of Pennsylvania from a public health standpoint:

Pennsylvania during 1929 has made the best record in health since the establishment of the department in 1905. In spite of the prevalence of influenza a year ago, the mortality for practically all the communicable diseases including those of the respiratory system show an exceedingly satisfactory decrease. Smallpox during 1929 was limited to a few cases which were traceable to other jurisdictions and the no-death record for the last five years was repeated. Typhoid fever continued to show a consistent decrease over former years resulting in a new low record for 1929. Even the degenerative diseases including afflictions of the heart, despite a general upward trend throughout the nation, did not register as high a toll as might have been expected from the figures of previous years.

Definite progress has also been made in the great problem of reducing the pollution of the streams in the State, and the prospects for the future in this connection are exceedingly bright.

The deaths of newborn infants and the maternal mortality rate are not as yet satisfactory, however. Pennsylvania's record, while approximating the average of the states in the Union, is worse than that of the majority of the European nations. It follows that those interested in public health in this commonwealth during the coming year could wisely concentrate their efforts upon this serious question. The utilization of the well-known preventive measures of prenatal care, careful obstetrics, and better supervision of mother and child will undoubtedly result in improving the 1929 situation in this respect.

If the people of Pennsylvania, individually and collectively, will coöperate with public health officials in 1930 by giving due attention and serious consideration to the fundamental rules of health, including sufficient exercises and sleep, moderation in their habits, and submission to a physical examination for the purpose of discovering latent conditions, the splendid record for 1929 can be improved in 1930.

Mosquito Control.—The United States Public Health Service is studying the problem of controlling malaria. Physicians of the southern states report that there has been an increase in cases for the past three years. To kill mosquitos on a large scale a gasoline-driven dust gun which blows a mixture of Paris green and plaster is being developed. It is claimed that insects at a distance of 600 feet have been killed by means of this mixture.—*World's Work.*

Trade Commission Rules Campaign of Tobacco Company Unfair.—The issue raised by the anti-sweets cigarette campaign, which led to the organization of the National Food Products Protective Committee and nation-wide protest by medical, church, social service, and advertising interests, against slenderizing the American woman by a cigarette diet, has been met in the stipulation published by the Federal Trade Commission in Washington. The agreement to abandon tainted testimonials and false medical and health claims, in connection with this cigarette advertising, is described as a victory for honest business.

Organized public opinion brought the evil effects of such business methods to the attention of Congress, and Senator Smoot, from the floor of the Senate, denounced this practice. The War Department deservingly rebuked a retired general for abusing his rank by giving a cigarette testimonial.

The cigarette campaign has served one good purpose. It has shown that public health cannot be attacked without bringing public resentment. It has proved to certain retired generals, popular war heroes, professional athletes, stage stars and film actresses that it is no longer safe to exploit their public reputations by permitting their names to be used in dishonest advertising.

Inactive Radioactive Products.—Action is being taken under the Federal Food and Drugs Act against alleged radioactive products which are falsely or fraudulently misbranded. Many have already been removed from the channels of trade and others are under investigation. An expert of the U. S. Food, Drug, and Insecticide Administration states that highly exagger-

ated claims, evidently designed to mislead the purchaser, are made for many of these products. Some of these products are hair tonics, bath compounds, suppositories, tissue creams, tonic tablets, face powders, ointments, mouth washes, demulcents, opiates, ophthalmic solutions, and healing pads. Analysis of the products claimed to be radioactive showed only five per cent to contain material quantities of radium. One article examined consisted of a short glass rod, one end coated with a yellow substance, enclosed in a glass bulb. This device hung over a bed would, according to the inventor, disperse "all thoughts and worry about work and troubles, and bring contentment, satisfaction, and body comforts that soon result in peaceful, restful sleep." Although most of the products are found to be deficient in radium, they might be dangerous if they contained too much. Radium in active dosage can do harm as well as good and should be administered with great caution.

Cancer Ranks Second as Cause of Death.—According to reports issued by the United States Census Bureau over the last two decades, deaths from other causes, except heart disease, have decreased, while those from cancer have risen, until this disease is now listed as second among the causes of death. As cancer is not a reportable disease, there is no accurate way of computing the number of cases that occur, and which are successfully treated. By early discovery and prompt removal, the further development of cancer could often be prevented.

Smallpox Stigma.—In a recent news release by the United States Public Health Service, data concerning the prevalence of smallpox and of typhoid fever are of particular interest. During the calendar year 1928, there were 38,000 cases of smallpox reported as opposed to 35,000 in 1927. Despite the fact that smallpox can be controlled by vaccination and, with the coöperation of the public, could even be eradicated in the course of a few years, more cases of this disease are reported each year in the United States than in any other country of the world except British India. The new low death rate for typhoid fever (4.8 per 100,000), has been effected largely through the practical application of the principles of modern sanitary science, an achievement of which health officers and others concerned in the advancement of sanitary methods may well be proud.

Prevention and Control of Venereal Diseases.—In a recent report to Congress, Surgeon General H. S. Cumming states that the control of venereal diseases may be regarded as one of the most important public health problems in this country today. It is estimated that in spite of preventive measures which have been applied and the decrease in prevalence which must have taken place since the World War, there still are constantly under treatment or observation by physicians and in clinics in the United States approximately 474,000 cases of gonorrhea and 643,000 cases of syphilis. The economic importance of the loss of carning power and the cost of medical care occasioned by these diseases can be readily appreciated. Moreover, this does not take in account the tragedy of gonorrheal blindness among infants, the serious (often fatal) pelvic infections which occur among innocent women, and the thousands of cases of insanity due to syphilis.

Diphtheria and Typhoid Fever under Normal Average.—During November there was a slight decline in diphtheria from the normal, while the incidence of typhoid fever was under the average of recent years.

In November, Smallpox Increased.—Smallpox, apparent in October, increased during November, according to a report of the Public Health Service, January 3. During the four-week period, a total of 3,042 cases were reported, an increase of 75 per cent over the average for the past three years. The highest incidence was centered around the States of the Great Lakes.

Morbidity in Pennsylvania in December, 1929

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Aliquippa	8	0	1	0	11
Allentown	4	4	16	0	12
Altoona	0	10	9	0	7
Ambridge	0	0	0	0	0
Beaver Falls	1	0	2	0	3
Berwick	0	0	0	0	0
Bethlehem	1	2	19	1	8
Braddock	2	0	10	0	7
Bradford	2	3	1	0	8
Bristol	2	4	18	0	1
Butler	1	22	3	1	1
Canonsburg	1	5	0	0	0
Carbondale	8	0	1	0	0
Carlisle	0	0	0	0	3
Carnegie	4	1	5	0	1
Chambersburg	0	1	2	0	4
Charleroi	2	0	3	0	3
Chester	4	1	6	0	1
Coatesville	11	0	1	0	0
Columbia	0	1	0	0	0
Connellsville	0	3	6	0	0
Dickson City	1	0	0	0	0
Donora	0	0	0	0	2
Dubois	0	0	0	0	1
Dunmore	3	0	0	0	0
Duquesne	2	0	10	0	0
Easton	3	0	39	0	6
Erie	7	5	18	1	20
Farrell	0	48	0	0	0
Greensburg	2	2	1	0	0
Harrisburg	1	0	31	0	6
Hazleton	25	0	2	0	2
Homestead	3	0	2	0	0
Jeannette	3	1	0	0	0
Johnstown	1	5	7	0	38
Lancaster	2	2	2	0	19
Lebanon	2	1	10	0	0
McKeesport	4	0	8	0	16
McKees Rocks	1	1	1	0	0
Mahanoy City	4	0	0	0	2
Meadville	0	0	0	0	0
Monessen	14	2	1	0	0
Mount Carmel	3	1	0	0	0
Nanticoke	1	0	0	0	0
New Castle	3	45	8	2	10
New Kensington	0	0	10	0	1
Norristown	0	1	5	0	5
North Braddock	3	0	7	0	1
Oil City	0	0	19	0	6
Old Forge	2	0	1	0	0
Olyphant	2	0	0	0	0
Philadelphia	100	72	358	3	99
Phoenixville	0	1	7	0	8
Pittsburgh	82	90	142	1	54
Pittston	0	0	0	0	0
Plymouth	1	0	1	0	0
Pottstown	1	0	2	2	0

Morbidity in Pennsylvania in December, 1929

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Pottsville	9	0	0	0	0
Punxsutawney	0	0	0	0	0
Reading	1	3	12	0	44
Scranton	0	1	10	0	9
Shamokin	3	0	2	0	1
Sharon	0	173	9	0	5
Shenandoah	6	0	0	0	0
Steelton	0	0	2	0	0
Sunbury	1	3	0	0	0
Swissvale	0	0	0	0	2
Tamaqua	8	5	1	0	2
Uniontown	0	2	3	4	13
Warren	1	1	3	1	1
Washington	0	2	3	0	0
West Chester	1	1	0	0	7
Wilkes-Barre	10	1	29	1	5
Wilkinsburg	2	0	8	1	4
Williamsport	2	21	2	0	14
York	1	29	4	0	0
Total Urban	372	576	883	18	473
Total Rural	303	1,090	666	43	830
Total State	675	1,666	1,549	61	1,303

STATE WIDE HEALTH EDUCATION IN PROTECTING CHILDREN FROM TUBERCULOSIS

Protecting children from tuberculosis is to be the objective of a nation-wide health education project in April—in which Pennsylvania will join.

This health effort is sponsored by the National Tuberculosis Association. In Pennsylvania it is directed by the Pennsylvania Tuberculosis Society in coöperation with its one hundred affiliated organizations. These agencies are requesting the coöperation of physicians, public health officials, and medical, civic, and other organizations interested in public health and welfare.

It is aimed to set strongly before the public the fact that tuberculosis usually begins in childhood. It will be emphasized that preventive measures are most effective when put into effect during the period of latency. Dr. Kendall Emerson, managing director of the National Tuberculosis Association, referring to this educational project says:

"The soundness of the project is beyond dispute. It gives us an opportunity to set before the American people a timely message by the force of united numbers and with the aid of excellent materials. How could we better bend our energies than by stimulating an interest in the detection of tuberculosis in its seedling stage?"

Special material has been prepared, including literature, posters, slides, and a motion picture. The film is entitled, *Tuberculosis and How It May Be Avoided.* This is an exposition of the biology of tuberculosis, with emphasis on health habits and procedures designed to prevent or overcome infection. A set of slides on childhood tuberculosis is available for showing before medical groups.

In every feature of the campaign emphasis will be placed upon early examination at the hands of physicians of children who manifest any signs of being below par physically and of prompt treatment for those who give any indication of having tuberculosis. Of special interest to the practicing physician will be a 32-page pamphlet entitled, *The Childhood Type of Tuberculosis.* This contains various diagnostic aids and is a clear, concise, up-to-date treatment of the subject. It was written by Dr. Henry D. Chadwick and endorsed by the Committee on Childhood Tuberculosis fo the American Sanatorium Association. The x-ray plates and diagrams were furnished by Dr. F. Maurice McPhedran, of the Henry Phipps Institute, Philadelphia. Both of these men are outstanding specialists in the diagnosis and treatment of tuberculosis.

A foreword says:

"This brochure attempts to correlate the knowledge we now have of the etiology and evolution of tuberculosis in children. Phthisis pulmonalis, or pulmonary tuberculosis of the adult type, is not commonly seen in young children. Children do, however, exhibit the earlier forms of tuberculosis."

In defining the term it is recommended that the childhood type of tuberculosis be used instead of infantile, juvenile, or hilum tuberculosis. It specifically includes tuberculous lesions of the tracheobronchial glands. The differences between childhood and adult types are defined.

Other features of the booklet include an explanation of the tuberculin test, Mantoux or intracutaneous method, as applied at the Henry Phipps Institute; the Pirquet method; classification of tuberculous pulmonary lesions in childhood and adolescence and case finding as practiced in Massachusetts under The Ten Year Program in progress there.

Further information and literature can be secured through communicating with county tuberculosis associations or the Pennsylvania Tuberculosis Society, 409 Social Service Building, 311 S. Juniper Street, Philadelphia.

Tuberculosis Abstracts

A Review for Physicians

PREPARED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Published through the coöperation of the Pennsylvania Tuberculosis Society and the Medical Society of the State of Pennsylvania

NATURE'S medicine chest contains no more useful or important remedy than rest. In the treatment of tuberculosis, we use numerous devices to immobilize the lung itself, but still rely chiefly on general body rest. Complete rest, however, is not achieved merely by commanding the patient to be quiet or by putting him to bed. Tenseness of mind, nerves, and muscles prevents most of us from resigning ourselves to a vegetable inactivity and so deriving the maximum benefit from rest. Edmund Jacobson, of the University of Chicago, has made a scientific study of rest, on the basis of which he has developed a technic of securing complete relaxation. The following excerpts are derived from his book, *Progressive Relaxation,* published by the University of Chicago Press.

Neuromuscular Hypertension and Relaxation

Neuromuscular hypertension is due to a reflex excitation or irritability. In disorders involving structural nerve lesions, such as hemiplegia and diplegia, this tenseness is easily discernible. Similar, but less obvious, symptoms of hypertension may be observed also in persons without nerve trauma and in those not ordinarily branded as "nervous, restless, or irritable."

The symptoms of hypertension have their origin in a variety of conditions, including prolonged pain or distress, emotional disturbances, such as fright, loss, or bereavement, bacterial infections, trauma of all kinds, chronic nervous strains, and possibly congenital defects of the nervous system. The author distinguishes sharply between hypertension and neurasthenia (a fatigue phenomenon) and says that, like arterial hypertension, the term represents not a diagnosis but merely a systemic condition and does not deny possible underlying pathology.

Overcoming Residual Tension

When an unpracticed person is instructed to relax, tests generally reveal a "residual tension" which appears to be a fine tonic contraction along with slight movements or reflexes. The respiration is slightly irregular, the pulse may be moderately increased (as compared with the pulse in complete relaxation), there are local reflex activities such as frowning, movement of the eyeballs, restless shiftings of head, limb, or fingers; the knee jerks can be easily elicited, and a sudden, unexpected noise causes the patient to start. Doing away with this residual tension, slight as it may be, is what is needed to derive the full benefits of relaxation. This is accomplished only as the result of practice. When relaxation is complete, the individual lies quietly with flaccid limbs, there is no trace of stiffness, no reflex swallowing, movement of the eyelids, nervous movements or tremor, while mental and emotional activity dwindles and disappears for brief periods. The condition is plesant and restful. The sleep which often results is not a hypnoidal or trance state but a perfectly natural sleep.

The patient is taught to localize muscular contraction; in this case, the *orbicularis oculi.* —*Courtesy U. of C. Press.*

Teaching the Patient to Relax

Learning to relax is a matter of nervous reeducation. The patient is taught first how to identify and to localize tensions. Once he has cultivated a muscle-sense (joint and tendon sensations may be disregarded), he easily learns to "relax his tensions away." Practice begins with the patient lying comfortably on his back on a couch. He is told to contract steadily and slowly a single group of muscles, say the flexors of the forearm, while the upper arm rests limply on the couch. The physician's hand retards the move-

ment slightly so as to intensify the sensation of muscular contraction. The patient observes the muscle "feel," though he does not concern himself with the anatomical details, nor should he palpate his own muscles or watch his own movements, this being the physician's function. As the patient acquires skill, the physician's passive resistance may be omitted. When the experience of localizing a contraction has become thoroughly familiar, the patient becomes aware of what he is *not to do;* he learns to "let go" and discovers that relaxation is simply the negative state of contraction. Practice with a given set of muscles eventually enables him to relax them without effort. Thus, one set of muscles after another is trained, not omitting the facial muscles and the eyes, until the patient learns to relax the entire body at will.

Suggestion Not a Factor

At no time is the instruction given to stop thinking or to make the mind a blank. The fact that one may go to sleep while practicing muscular relaxation harmonizes with the laboratory evidence that mental and emotional activity always involves a motor element and that by decreasing this motor element such activity is apparently diminished. The author insists emphatically that the method of progressive relaxation is not a form of "suggestion" or hypnosis; in fact, in his training of patients, he scrupulously avoids suggesting effects that may follow and simply directs his patient what to do in the same manner as when prescribing diet or exercise. Voluntary relaxation of an undesired mental activity differs in mechanism from so-called "suppression" or "repression," which are commonly attended with effort, which is the reverse of relaxation. In progressive relaxation, the subject exercises the "will" to relax, and success is dependent on habit formation.

Emotional Activity Involves Motor Element

Mental and emotional activity always involves a motor element. On the basis of his experiments with intelligent subjects, the author concludes that a tenseness of muscles of the ocular region accompanies visual imagery. With complete ocular relaxation, the image disappears. Auditory imagery is similarly associated with a sense of tenseness, felt perhaps in the auditory apparatus but characteristically in the ocular muscles. When the subject succeeds in maintaining the imageless state for a relatively prolonged time, natural sleep ensues. "Nervous individuals tend to rehearse their griefs, difficulties, and problems, considering incessantly and perhaps incoördinately what to do about them; and this emotional reflection evidently is a fountainhead of nervous hypertension, which relaxation mechanically shuts off."

Relaxation with open eyelids gives the patient a particularly vacuous appearance. —*Courtesy U. of C. Press.*

Therapeutic Application

Dr. Jacobson believes this method of obtaining rest has possibilities of widespread therapeutic application. In some disorders, it may be used as the principal or only method of treatment, while in others it may be regarded as an adjunct to other medical or surgical treatment. An analysis of the 81 cases treated under his direction by relaxation alone reveals that most of them were conditions dependent upon or related to neuroses or psychoses. The list of pathologic conditions treated includes nervous hypertension, chronic insomnia, convulsive tic, esophageal spasm, Graves' disease, mucous colitis, spastic peresis, stuttering, stammering, and others. In this series of 81 cases, he reports objective results in terms of improvement as follows: slight—13; marked—28; very marked—36; doubtful—4. Equally good are the results of cases in which supplementary dietetic or surgical treatment was indicated and used.

* * * *

Is the Method Applicable to Tuberculosis?

Little mention is made in the book of tuberculosis, perhaps for the reason that the author's research has been concerned primarily with the treatment of conditions more definitely dependent upon, or associated with, neuromuscular tensions. Since, however, rest is the pillar on which the treatment of this disease depends, it would seem worth while to investigate the possibilities of this method for tuberculous patients.

Save the Children

In line with a national campaign, the Pennsylvania Tuberculosis Society and its affiliated organizations will conduct in April a campaign for the Early Diagnosis of Tuberculosis. Emphasis will be placed on the protection of children from tuberculosis.

THE MEDICAL SOCIETY
OF THE
STATE OF PENNSYLVANIA

Officers' Department

WALTER F. DONALDSON, M.D.
Secretary
8063 Jenkins Arcade Bldg.,
Pittsburgh, Pa.

WHAT TO DO IF THREATENED WITH SUIT FOR ALLEGED MALPRACTICE

A physician threatened with suit for alleged malpractice usually receives his first intimation of same in the form of a letter from an attorney stating that his former patient has recently sought his legal advice, and that considerable trouble might be saved all concerned by an early interview between the physician and the attorney.

What should a member of the Medical Society of the State of Pennsylvania do under such circumstances?

He should, without comment, promptly acknowledge receipt of the communication, and state that further reply would no doubt be made in due time by his (the physician's) legal representative (not necessary to name). The threatened member should *immediately* send copies of this correspondence to the Secretary of the Medical Society of the State of Pennsylvania, either direct or through his county society Secretary, or the Trustee and Councilor of the State Society for his district (see receipt for your county society dues). This done, *there is no occasion for haste*, and no occasion for actually consulting an attorney until after a formal summons from the Court of Common Pleas has been served by a representative of the court. Such summons always mentions a time limit, usually fifteen to thirty days, during which an appearance must be made in court in behalf of the physician upon whom summons has been served. This period leaves ample time for the completion of a formal application by the member for the assistance of his State Medical Society in the conduct of his defense.

Every step in the requirements printed on the application blank is based on twenty-five years' experience in the administration of the medical defense benefits of our State Society, and is designed to acquaint the Board of Censors of the threatened physician's county medical society and the Councilor for the district, the Secretary, and the President of the State Society, and the Legal Counselor for the State Society, with the charges against the threatened member, as well as his recital of his methods pursued in treating the case. The names of consultants called, if any, and the office or laboratory and hospital records of the case available for developing plans for the conduct of the defense in court are thus reviewed by certain of the threatened physician's fellow-members. As a result of this care in approving applications for defense by the State Society, many threatened suits in the past have been abandoned and those coming to trial nearly always successfully defended.

In conclusion, we advise all members, first, to pay their annual county medical society dues promptly (before March 31 to be eligible for medical defense benefits); second, to keep records of all patients; third, to seek consultation in unusually difficult cases; fourth, to require patients refusing x-ray pictures, when requested, to sign a release blank; and finally, to consult promptly the Secretary of their county or State medical society before discussing with an attorney any threat based on alleged malpractice.

CONTRIBUTIONS TO MEDICAL BENEVOLENCE FUND

The Committee on Medical Benevolence gratefully acknowledge receipt of the following contributions to the Medical Benevolence Fund:

Clearfield County Medical Society	$50.00
Woman's Auxiliary to the Medical Society of the State of Pennsylvania	100.00
Woman's Auxiliary Montgomery County Medical Society	60.00
Woman's Auxiliary Berks County Medical Society	50.00
A Friend (Allegheny County)	10.00
John M. Higgins, Sayre	5.00

MARCH 31 AND MEDICAL DEFENSE BENEFITS

Members who have not paid their 1930 county society dues should bear in mind that medical defense benefits are not extended to those whose annual dues are not received by the State Society on or before March 31st. Reinstatement is easily possible, but protection against suits for alleged malpractice can never be restored for the period from January 1st to the time of payment of the delinquent dues.

On February 20, 1930, this office had received the annual assessment of 3,764 members; on the same day 1929, 3,687.

The percentage of 1930 dues received at this office February 20 from certain medical societies is herewith indicated: Montour 100%, Juniata 89%, Franklin 83%, Potter 83%, Montgomery 81%, Carbon 80%, Berks 77%, Mifflin 75%, Lebanon 72%, Mercer 72%, Delaware 71%, Indiana 71%, Perry 71%, Clinton 70%, Northumberland 70%, Elk 69%, Huntingdon 68%, York 68%, Schuylkill 66%, Somerset 65%, Union 64%, Cambria 63%, Lycoming 63%, Cumberland 61%, Clarion 59%, Dauphin 58%, Columbia 56%, Greene 56%, Venango 56%, Lackawanna 55%, Northampton 55%, Allegheny 51%, McKean 51%.

X-RAY RELEASE BLANKS

Members are reminded that the secretary of each county society, as well as the secretary of the State Society, is prepared to forward, in response to requests, a legal release blank to be used when treating fractures, dislocations, or foreign-body cases, in which it is impossible for any reason to obtain adequate x-ray pictures to assist in correct diagnosis and treatment. Any time within two years of your treatment of such a case, you may be sued for alleged malpractice. X-ray records in support of your diagnosis and treatment may prove invaluable.

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to February 15:

ADAMS: *New Member*—Roy W. Gifford, Gettysburg.

ALLEGHENY: *New Members*—Louis Bernstein, Jenkins Arcade; Robert J. Billings, 867 Lockhart St., N.S., Joseph J. Hersh, Jenkins Arcade, Andrew B. Fuller, 121 University Place, Henry F. Miksch, Jenkins Arcade, Frank J. Santora, St. John's Hospital, N.S., Henry Weintraub, 1710 Carson St., Warren A. Wolf, 121 University Place, A. R. Woodburne, Union Trust Bldg., Pittsburgh; Herbert C. McClelland, 400 Bessemer Ave., East Pittsburgh; Joseph A. Zahorchack, 310 Corbet St., Tarentum. *Reinstated Member*—Samuel Goldberg, 536½ Fifth Ave., McKeesport. *Resignation*—Eugene F. Meschter, Bessie Greenberger, Pittsburgh. *Removal*—Robert H. McClellan from McKeesport to 605 Cedar St., Irwin; George H. Camp from Freedom to 5500 Penn Ave., Pittsburgh. *Deaths*—James I. Johnston, Pittsburgh (Univ. of Pa., '93), Feb. 9, aged 62; Lawrence Litchfield, Pittsburgh (Bell. Hosp. Med. Coll., '88), Jan. 15, aged 69; Adam P. Fogelman, Sheridan (Leb. Co.) (Univ. of Pa., '84), Jan. 11, aged 70.

BEAVER: *New Member*—David A. Belinky, Aliquippa.

BERKS: *New Members*—George R. Curry, 415 Walnut St., Edward M. Deacon, 307 S. Sixth St., Merrill B. De Wire, 236 N. Fifth St., Charles R. Essick, 439 Oley St., Philip Jaisohn, St. Joseph's Hospital, Ray C. Klopp, 1360 Perkiomen Ave., Herman F. Kotzen, 236 N. Fifth St., Frank W. Lawrence, 1502 Perkiomen Ave., Earl W. Rothermel, 746 N. Tenth St., William J. Yutske, 534 Center Ave., Reading; Ray F. Hain, Sinking Spring. *Resignation*—Lucia Anna Wheeler, Wernersville.

CAMBRIA: *Resignation*—Ray D. Saul, Grand Rapids, Mich.

CENTER: *New Members*—W. B. McLaughlin, Rockview, R. D., Bellefonte; Herbert R. Glenn, State College.

CLARION: *New Member*—Le Roy E. Wible, Clarion.

CRAWFORD: *New Member*—W. H. Brennan, Meadville.

DAUPHIN: *New Member*—Samuel B. Fluke, 512 N. Second St., Harrisburg. *Death*—Booth E. Miller, Harrisburg (Univ. of Pa., '09), Jan. 8, aged 46.

DELAWARE: *Transfer*—Edward H. Bedrossian, 531 Foss Ave., Drexel Hill, from Philadelphia County Society.

ELK: *Removal*—Edward A. Mansuy from Driftwood to 12 Chantaugua Pl., Bradford (McKean Co.).

FRANKLIN: *Reinstated Member*—Joseph Enniss, Waynesboro. *Removal*—Chester P. Swett from South Mountain to State San., Hamburg (Berks Co.).

GREENE: *Transfer*—Jesse H. Hazlett, Waynesburg (formerly of Vandcrbilt), from Fayette County Society; Charles P. Reed, Nemacolin, from Indiana County Society. *Removal*—Jesse Margolis from Heilwood to Grays Landing (Fay. Co.).

INDIANA: *Removal*—Bruce Griffin from Dixonville to Russellton (Alleg. Co.).

LACKAWANNA: *New Member*—James R. Walsh, 10 S. Church St., Carbondale.

LANCASTER: *New Members*—Abram P. Shaub, 545 N. Mary St., Ross Proctor, 323 W. King St., Lancaster; Cornell G. Gray, Marietta; John M. Ranck, Leola; Gardiner P. Taylor, 432 Chestnut St., Columbia.

LAWRENCE: *New Member*—Gratta E. Seal, New Castle.

LEBANON: *New Members*—John F. Loehle, Lebanon; James F. Swank, Fredericksburg.

LEHIGH: *New Member*—Gerald S. Backenstoe, 500 Chestnut St., Emaus.

LUZERNE: *Reinstated Members*—John A. Hilbert, 15 S. Franklin St., Wilkes-Barre; William R. Sulman, 77 N. Church St., Hazleton. *New Member*—William J. Llewellyn, 89 Lyndwood Ave., Wilkes-Barre.

LYCOMING: *Removal*—George T. Waggoner from Williamsport to Lawton Bldg., Corry (Erie Co.).

MERCER: *Removal*—Samuel J. Dickey from Grove City to 1615 Briggs St., Harrisburg (Dauphin Co.).

MONROE: *Removal*—Elizabeth Clark from Mt. Pocono to 1125 Front St., Harrisburg (Dauphin Co.). *Death*—George S. Travis, E. Stroudsburg (Balt. Med. Coll., '96), Jan. 22, aged 60.

MONTGOMERY: *New Members*—Fay A. Heflin, State Hospital, Norristown; James A. Shelly, Ambler. *Removal*—J. K. Williams Wood from Willow Grove to 172 Canton St., Troy.

MONTOUR: *New Member*—Donald B. McHenry, 211 Ferry St., Danville.

NORTHAMPTON: *New Members*—Eugene Ackerman, 808 E. Fourth St., Milton H. Herbein, 725 Seneca St., Luther I. Fisher, 321 W. Fourth St., Bethlehem; Stephen E. Murray, 1440 Washington St., Easton. *Removal*—Waldemar T. Fedko from Bethlehem to c/o Stone-Webster Co., Pottsville.

NORTHUMBERLAND: *Removal*—Robert E. Allen from Shamokin to Kulpmont.

PERRY: *New Member*—Carl G. Kapp, Duncannon.

PHILADELPHIA: *New Members*—Henry E. Austin, U. S. V. Hospital, Nedjib M. Bekir, 655 E. Allegheny Ave., Ernest Allen Brav, Cor. 68th Ave. and 13th St., Joseph F. Dougherty, 7199 Berkeley Road, Upper Darby, Isador Forman, 1721 N. 52nd St., John Q. Griffiths, Jr., University Hospital, Wilber L. Hutchinson, 1113 Spruce St., A. Neill Lemon, 7107 Rising Sun Ave., George E. Marcil, 700 Marlyn Road, Morris Myers, 1111 W. Lehigh Ave., Alan P. Parker, 258 S. 18th St., Harry H. Simpkins, 5715 N. 5th St., Herbert J. Smith, 3303 N. 17th St., Joseph Stokes, Jr., 159 W. Coulter St., Gtn., Elmer L. Straub, 3562 Oakmont Ave., John H. Willard, Chatham Court Apts., 49th and Locust Sts., John C. Williams, 6370 Germantown Ave., James E. Wyant, 1729 Spruce St., Anson L. Clark, 1737 Chestnut St., Myron J. Lava, 2806 Frankford Ave., Joseph Tiracchia, 1528 Tasker St., William F. McLaughlin, 4003 Chestnut St., Charles Q. DeLuca, 1642 S. 12th St., Louis Kaplan, 949 N. 8th St., Henry S. Kinloch, 322 Walnut St., Samuel C. Rosen, 5353 Spruce St., Theodore S. Wilder, 3319 W. Penn St., Gtn., Edward Dessen, 5334 Lebanon Ave., Chevalier L. Jackson, 235 S. 15th St., Louis M. Paster, 5338 Arlington St., Bernard B. Stein, 833 S. 59th St., Henry F. Ulrich, 4008 Spruce St., LeRoy J. Wenger, 312 N. Clifton Ave., Sharon Hill, William R. Williams, Medical Arts Bldg., Gottlieb S. Leventhal, 115 N. 60th St., Morris Rudolph, 810 S. 5th St., Frederick W. Smith, 1930 Chestnut St., Philadelphia; Lylburn C. Downing, 407 N. W. 7th Ave., Roanoke, Va. *Reinstated Member*—William J. Ryan, Medical Arts Bldg., Philadelphia. *Resignation*—Onie Ann Barrett, Wakeman, O.; Frederick J. Haerer, Miami, Fla.; Dwight B. Fuller, George W. Geyer, William Irwin, Raymond S. Leopold, Harold G. Palmer, John Purdy, Joseph M. Reeves, Charles L. W. Rieger, William Ruoff, Francis E. Stewart, William Hannum, S. Rosa Frank, E. L. Drake, Walter Jackson Freeman, Joseph R. Parke, Everett S. Barr, John H. Besancon, Henry W. Cattell, Joseph M. Hayman, Jr., Charles J. Prohaska, Philadelphia. *Deaths*—Levi J. Hammond, Philadelphia (Univ. of Pa., '86), Jan. 6, aged 64; Tallyrand D. Myers, Palo Alto, Calif. (Jeff. Med. Coll., '68), Dec. 26, aged 84.

SNYDER: *Death*—John O. Wagner, Beaver Springs (Coll. Phys. & Surg., Balt., '80), Feb. 3, aged 75.

UNION: *New Member*—Amos V. Persing, Jr., Allenwood.

VENANGO: *New Member*—William G. Morrow, West Hickory. *Transfer*—R. Varnum Jones, 105 Senеca St., Oil City, from Erie County Society.

WARREN: *New Member*—Frank M. Buckingham, 123 Main St., Tidioute.

WESTMORELAND: *New Members*—Albert R. Kaufman, Logan Trust Bldg., New Kensington; Arthur B. Gruver, Latrobe.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since January 17. Figures in first column indicate county society numbers; second column, State Society numbers:

1930				
Jan. 17	Montgomery	101-108	735-742	$60.00
	Venango	1-22	743-764	165.00
	Cumberland	1-10	765-774	75.00
	Perry	1-7	775-781	52.50
	Montour	17	782	7.50
	Greene	1-18	783-800	135.00
	Schuylkill	81-90	801-810	75.00
	Delaware	48-53	811-816	45.00
	Susquehanna	1-6	817-822	45.00
	Allegheny	2, 3, 5, 6, 10, 11-19, 34-401	823-1204	2,865.00
	Berks	1-100	1205-1304	750.00
	Allegheny*	1303	7843	7.50
20	McKean	1-5	1305-1309	37.50
	Somerset	20-21	1310-1311	15.00
	Center	1-6	1312-1317	45.00
	Mercer	4-14	1318-1328	82.50
	Cambria	1-40	1329-1368	300.00
	Montour	18-23	1369-1374	45.00
	York	59-74	1375-1390	120.00
	Lehigh	9-20	1391-1402	90.00
	Mifflin	10-13	1403-1406	30.00
	Lackawanna	69-105	1407-1443	277.50
21	Northampton	1-76	1444-1519	570.00
	Franklin	23-28	1520-1525	45.00
	Mercer	15	1526	7.50
	Delaware	54-57	1527-1530	30.00
	Lawrence	22	1531	7.50
23	Venango	23-29	1532-1538	52.50
	Adams	2-3	1539-1540	15.00
	Franklin	29-35	1541-1547	52.50
	Indiana	20-22	1548-1550	22.50
	Delaware	58-60	1551-1553	22.50
24	Montgomery	109-119	1554-1564	82.50
	Luzerne*	303-304	7844-7845	15.00
	Indiana	23-26	1565-1568	30.00
25	Montour	24-25	1569-1570	15.00
	Somerset	22-26	1571-1575	37.50
	Dauphin	6, 8-66	1576-1635	450.00
	Delaware	61-62	1636-1637	15.00
	Warren	4-14	1638-1648	82.50
	Potter	1-4	1649-1652	30.00
	Northumberland	13-23	1653-1663	82.50
30	Potter	5-8	1664-1667	30.00
	Mercer	21-24	1668-1671	30.00
	Lebanon	1-23	1672-1694	172.50
	York	75-86	1695-1706	90.00
	Delaware	63-67	1707-1711	37.50
	Mercer	16-20	1712-1716	37.50
	Cumberland	11-17	1717-1723	52.50
31	Indiana	27-31	1724-1728	37.50
	Venango	29-30	1729-1730	15.00
Feb. 1	Adams	4-5	1731-1732	15.00
	Delaware	68-70	1733-1735	22.50
	Chester	1-33	1736-1768	247.50
	Cambria	41-50	1769-1778	75.00
	Montour	26	1779	7.50
	Mercer	25-28	1780-1783	30.00
4	Cumberland	18-20	1784-1786	22.50
	Schuylkill	91-96	1787-1792	45.00
	Westmoreland	1-44	1793-1836	330.00
	Clarion	14-16	1837-1839	22.50
	Beaver	2-34	1840-1872	247.50
6	Northumberland	24-40	1873-1889	127.50
	Delaware	71-75	1890-1894	37.50
	Mercer	29-37	1895-1903	67.50
	Lancaster	1-14	1904-1917	105.00
7	Erie	21, 23-39	1918-1935	135.00
	Armstrong	1-19	1936-1954	142.50
	Schuylkill	97-106	1955-1964	75.00
	Franklin	36-41	1965-1970	45.00
	Dauphin	67-89	1971-1993	172.50
	Indiana	32-33	1994-1995	15.00
10	Adams	6-8	1996-1998	22.50
	Montgomery	120-130	1999-2009	82.50
	Mifflin	14-16	2010-2012	22.50
	Lackawanna	106-131	2013-2038	195.00
	Crawford	5-6	2039-2040	15.00
	Lawrence	13, 23-30	2041-2049	67.50
	Fayette	28-43	2050-2065	120.00

* Indicates 1929 dues.

1930				
Feb. 10	Mercer	38-45	2066-2073	$60.00
	Montour	27	2074	7.50
	Clinton	1-16	2075-2090	120.00
	Dauphin	90	2091	7.50
	Allegheny	1, 4, 7, 8, 9, 402-669	2092-2364	2,047.50
	Philadelphia	1-1050	2365-3414	7,875.00
11	Carbon	1-24	3415-3438	180.00
15	Mifflin	17-18	3439-3440	15.00
	Mercer	46-48	3441-3443	22.50
	Butler	1-16	3444-3459	120.00
	Delaware	76-80	3460-3464	37.50
	Bradford	5-14	3465-3474	75.00
	Center	7	3475	7.50
	Potter	9-10	3476-3477	15.00
	Luzerne	8-59	3478-3529	390.00
	Armstrong	20-26	3530-3536	52.50
	Dauphin	91-102	3537-3548	90.00
	Union	1-9	3549-3557	67.50
	Indiana	34-36	3558-3560	22.50
	Cambria	51-104	3561-3614	405.00
	Berks	101-125	3615-3639	187.50
	Mercer	49-54	3640-3645	45.00
	Montgomery	131-141	3646-3656	82.50
17	Franklin	42-44	3657-3659	22.50
	Huntingdon	14-17	3660-3663	30.00
	Indiana	37-38	3664-3665	15.00
	Delaware	81-82	3666-3667	15.00
	Lycoming	53-71	3668-3686	142.50

COMMITTEE ON PUBLICITY

J. D. Keiper, M.D., *Chairman*
Johnstown, Pa.

JOHNSTOWN SESSION PROMISES MUCH TO THE PROFESSION

At a recent meeting of the various committee heads it was brought out that every one was working and matters shaping nicely for the entertainment of the State Society.

Thirty-one years ago the Convention was last held in the Flood City. Suffice to say that the Society has grown since then, and the city of Johnstown has grown also.

The Cambria County Medical Society feels that it is an honor to act as host to so important an organization and will make every effort to do so creditably. The Cambria organization asks only that every member of the State Society, who can possibly do so, be in attendance.

In addition to the scientific aspect of the convention, this committee assures those who are sportively inclined, that ample opportunity for activity will be arranged. The golfing interests are being capably arranged by Dr. J. P. Replogle and his committee with whom communications may be made direct. Sight seeing and entertainment for the women will also be amply provided.

An opportunity will be afforded to devotees of *target shooting* to try at clay targets on one of the best shooting grounds in the State. A tournament will be held on the grounds of the Johnstown-Windber Gun Club with three traps available.

To motorists, the city will arrange for advantageous parking.

Hotel accommodations are in charge of Dr. H. W. Salus and his committee, and this committee would recommend early correspondence with Dr. Salus as to reservations.

The Public Meeting promises to be a *whiz* with Dr. L. W. Hornick and his committee in charge.

As for the Smoker, well! you must come and see for yourself. Billy Lubken and his committee never do things but one way, the right way.

The Woman's Auxiliary, we are informed, is working full time in completing their program, and if you knew them as we know them, you would agree that their work will be well done. Mrs. R. M. Palmer is the executive in charge with Mrs. J. J. Meyer as chairman of the working committees and acting in conjunction with Mrs. W. J. Freeman of Philadelphia, president of the State Auxiliary.

Lest you forget mark your calendar now and keep it in plain sight.

COMMITTEE ON SCIENTIFIC WORK

C. Howard Marcy, M.D., *Chairman*
Pittsburgh, Pa.

THE 1930 SESSION

The Committee on Scientific Work met in Harrisburg, February 4th, to discuss plans for the fall meeting of the Medical Society of the State of Pennsylvania. Preliminary arrangements indicate that a most interesting program of highest standard will be provided. There will be no change in the number of sessions, although in a few instances combined meetings are being arranged in order to provide more general discussion.

The tentative outlines submitted by the section officers cover a variety of subjects which should prove of value to every physician, whether he is in general practice or special work. The speakers selected for the general sessions will devote their time to topics of interest to all branches of the profession. Subjects presented before the general sessions will include papers relating to various aspects of public health work, and general medical and surgical practice.

The General Committee on Arrangements, of which Dr. Olin G. A. Barker is chairman, reported satisfactory progress on local plans for meeting places and entertainment of guests.

Headquarters will be at the Lee-Strauss Building, the Scientific and Technical Exhibits and the Registration Bureau will be located on

the second floor. The House of Delegates, the Section on Surgery, the Eye, Ear, Nose, and Throat Section, the Section on Urology, the Section on Dermatology, and the closing General Session, will be held on the third floor of this building. The Section on Medicine will meet in the auditorium of the Joseph Johns School, and the Section on Pediatrics will meet in an auditorium of the Y. M. C. A. Both of these buildings are within a short distance from the Lee-Strauss Building. The Elks Club, which is also near, has been selected for the headquarters of the Woman's Auxiliary and provides a pleasant meeting place for this active organization. The Board of Trustees will meet in a conference room at the Fort Stanwix Hotel. This hotel will be the hotel headquarters and those who expect to attend should write for reservations. In this issue of the Journal, the hotels of Johnstown, and their particular rates, are listed. The Cambria County Medical Society is planning many attractive and interesting entertainments.

Johnstown is conveniently located in one of the most beautiful sections of the State. It is accessible by railroad and automobile. The Cambria County Medical Society is putting forth every effort to make the days of the meeting most profitable and entertaining. Mark your calendar now with "Annual Session of the Medical Society of the State of Pennsylvania—Johnstown, October 6th to 9th, 1930," so that nothing will interfere with your being present.

CALL FOR VOLUNTEER CASE REPORTS

Johnstown Session of the Medical Society of the State of Pennsylvania
October 6 to 9, 1930

General Meeting—8 Case Reports of 5 minutes each.

Section on Medicine—8 Case Reports of 5 minutes each.

Section on Surgery—8 Case Reports of 5 minutes each.

Section on Pediatrics—8 Case Reports of 5 minutes each.

Section on Eye, Ear, Nose, and Throat—5 Case Reports of 10 minutes each.

Section on Urology—8 Case Reports of 5 minutes each.

For publication in the Pennsylvania Medical Journal, the 5-minute case reports will be limited to 800 words; and the 10-minute case reports, to 1000 words.

In the General Meeting and Sections on Medicine, Surgery, and Pediatrics, fifteen minutes will be allowed for general discussion of these case reports, and five minutes for discussion in the Eye, Ear, Nose, and Throat Section.

Volunteer papers, with the titles and abstracts, will be considered by the Committee on Scientific Work, on or before May 1, 1930, but the Committee reserves the right to reject a paper if it does not fit in with the skeleton program tentatively planned at its February meeting, or if the paper is not of sufficient merit.

Authors of papers and case reports should send in their titles and abstracts at once to the secretary of the section in which they wish to appear, or to the Chairman of the Committee on Scientific Work.

General Meetings: Dr. C. Howard Marcy, 121 University Place, Pittsburgh, Pa.

Section on Medicine: Dr. T. Palmer Tredway, Box 463, Erie, Pa.

Section on Surgery: Dr. Samuel P. Mengel, 181 S. Franklin St., Wilkes-Barre, Pa.

Section on Eye, Ear, Nose, and Throat: Dr. Reid Nebinger, Geisinger Hospital, Danville, Pa.

Section on Pediatrics: Dr. Norbert D. Gannon, 345 W. Ninth St., Erie, Pa.

Section on Dermatology: Dr. Sigmund S. Greenbaum, 1714 Pine St., Philadelphia, Pa.

Section on Urology: Dr. Thomas C. Stellwagen, Jr., 220 S. Sixteenth St., Philadelphia, Pa.

COMMITTEE ON HOTELS

Henry W. Salus, M.D., *Chairman*
420 Franklin Street
Johnstown, Pa.

HOTEL RESERVATIONS FOR THE JOHNSTOWN SESSION

Having completed both the preliminary and the final survey of our hotel and restaurant situation, and having been assured of perfect coöperation from all hotel and restaurant proprietors, as well as the Johnstown Chamber of Commerce, the Hotel Committee of the Cambria County Medical Society wishes to assure those who desire to attend the Eightieth Annual Session of the Medical Society of the State of Pennsylvania, to be held in Johnstown, Pa., October 6 to 9, 1930, that there need be no doubt of the capability of our finest hotels being able to cope with the situation.

All the hotels and, in fact, all the activities in connection with the convention, are confined

within a radius of only three city blocks in any direction.

Johnstown can well boast of better hotel accommodations than most cities of its size and equally as well as some cities of much larger size.

We list the following of the larger hotels and the available rooms:

FORT STANWIX (headquarters) will have 175 rooms available at the following prices: Single, with running water, $2 and $2.50; double room, with running water, $3.00 and $4.00; single room, with shower, $3.00 and $4.50; double room, with shower, $5.00 and $5.50; single room, with bath, $4.00 and $5.00; double room, with bath, $6.00, $7.00, and $8.00.

HOTEL HENDLER has assured us of 110 rooms at the following prices: Single room, with running water, $2.00 and $2.50; double room, with running water, $3.00 and $3.50; single room, with bath, $3.00 and $3.50; double room, with bath, $5.00.

CRYSTAL HOTEL has sixty rooms at the following prices: Single room, with running water, $2.00 and $2.50; double room, with running water, $3.00 and $3.50; single room, with bath, $2.50 and $3.00; double room, with bath, $4.50 and $5.00.

CAPITAL HOTEL has 80 rooms available at the following rates: Single room, with running water, $2.00; double room, with running water, $3.00; single room, with bath, $3.00; double room with bath, $5.00.

LURAY HOTEL submits the following prices for 30 available rooms: Single room, with running water, $2.00; double room, with running water, $3.00; single room, with bath, $3.00; double room, with bath, $4.00.

BARD HOTEL has 30 rooms available at the following prices: Single room, with running water, $1.50; double room with running water, $2.50; single room, with bath and shower, $2.00; double room, with bath and shower, $3.00.

MERCHANTS HOTEL has 80 rooms available at the following rates: Single room, with running water, $1.50; double room, with running water, $2.50; single room, with bath, $2.25 and $2.50; double room, with bath, $3.50 and $4.00.

The Cambria County Medical Society has pledged private homes which will accommodate 1,200, if the hotel facilities are exhausted. No one, therefore, need miss this meeting through lack of facilities.

The census taken as to the number of visitors that we can accommodate in comfort checks up most favorably with the census taken of other cities where our conventions have previously been held. It is, however, advisable that requests for reservations be sent to the Hotel Committee very early.

County Society Reports

BERKS—JANUARY-FEBRUARY

The regular monthly meeting of the Society was held on the 14th, at Medical Hall. The following officers were elected: president, Robert M. Alexander, M.D.; vice-presidents, John H. Rorke, M.D., and Louis J. Livingood, M.D.; secretary, W. Wendel Becker, M.D.; treasurer, Martin M. Wassersweig, M.D.; reporter, Pearl E. Hackman, M.D.; librarian, David S. Grim, M.D.; censor (1930-33), Daniel Longaker, M.D.; trustee (1930-35), Cyrus B. Zimmerman, M.D. The retiring president vacated the chair in favor of the newly elected president.

"The Significance of Leukorrhea and Uterine Hemorrhage after the Menopause." By BROOKE M. ANSPACH, M.D., professor of gynecology at Jefferson Medical College, Philadelphia.—Leukorrhea and a bloody vaginal discharge are suspicious when seen both before and after the menopause. The local and easily discernible lesions do not cause the physician much trouble, but when the adnexa are under consideration the diagnosis is often obscure. Many cases are found where the suspicions of the medical attendant are directed towards cancer and yet no physical changes can be found.

Women are more prone to submit themselves to physical examination, especially pelvic examination, because of the fear of cancer and through the educational work done by the cancer commissions. Even with this aid in having earlier examinations, there are no discoverable physical signs, or the physical formation of the patient prevents accurate informatory findings. Therefore, when the suspicions are aroused and no physical change can be found in uterus or external genitalia, a possible cancer of the adnexa should be considered. Under such circumstances, an exploratory operation should be offered the patient, because the diagnosis can be established or excluded in this way only. It is, however, difficult to obtain permission for such an operation.

Cancer of the adnexa is frequently discovered when it is too late to be of any value. There are no early pathognomonic signs or symptoms. The importance of frequent, early, and thorough physical examination can readily be seen, and cannot be urged too strongly upon the profession. The investigation of all symptoms is imperative.

Dr. C. H. Shearer discussed the paper.

The Society met at Medical Hall, February 11, at 3.15 p. m. A business meeting, presenting the new policies sponsored by the new régime, preceded the scientific program.

A motion picture, "The Gastro-Intestinal Tract," was shown. The first reel was made at the University of Chicago by Professors A. J. Carlson and Arno B. Luckhardt. Stomach and intestinal motilities of dog, cat, and rabbit were shown, also the physiologic effect (acceleration) of vagal stimulation. Two interesting views showed haustral churning in the cecum of a rabbit, and segmentation in the cat. Peristalsis, antiperistalsis, and defecation were demonstrated. The second reel comprised a study of the influence of drugs on gastro-intestinal motility. The drugs used were physostigmin, atropin, epinephrin, and Epsom salts. Physostigmin and epinephrin produced reversed, as well as acceleration of, peristalsis. A subserous injection of epinephrin in the stomach produced localized spasms. Active mobility was completely inhibited by atropin. A fifty-per-cent solution of magnesium sulphate produced reversed peristalsis, retching, and vomiting. This picture was made at the Northwestern University by Drs. H. B. Kellogg and L. W. Dowd of the Department of Anatomy. The third reel (made by the same department), presented a gross dissection, step by step, of aponeurosis, fat, fascia, muscles, arteries, veins, nerves, ligaments, and regional topography.

Discussion by Drs. R. C. Travis and C. J. Dietrich showed that: (1) X-ray findings of humans agreed with animal experimentation. (2) Peristalsis, while slow and weak in the fundus of the stomach, accelerated in its progression toward the pyloric end. (3) Change in posture caused difference in shape and motility of stomach. (4) Though the hepatic flexure in visceroptosis may move down three to four inches, the splenic flexure remains up under the ribs and never sags. (5) Segmentation under x-ray is different from that seen at surgical operation. (6) Sedatives such as atropin, soda bicarbonate, or sodium bromid frequently give better results in obstinate cases than do stimulants and the various gastric juice extracts.

Pearl E. Hackman, M.D., *Reporter.*

CHESTER—JANUARY

The Society met in Coatesville in conjunction with the annual meeting of the Health and Welfare Society of the County.

Dr. Michael Margolies delivered the president's address outlining particularly the efforts of the Society during the past year to promote public health activities throughout the county. These efforts have culminated in the probable appropriation of funds by the county commissioners to employ a full-time doctor of public health to carry out the program of the County Medical Society. This work will be largely investigative and educational.

Dr. Haven Emerson of New York addressed the Society on "Public Health Conditions in the County." In his address he demonstrated the waste of effort and money in attempting to carry on preventive work with an incomplete organization. He outlined the necessary personnel and framework of an efficient county health organization. He supported his remarks with many interesting facts and figures.

At the conclusion of the meeting there was a large public dinner at which were approximately 250 persons from various organizations of the county which are interested in health and welfare. Dr. Emerson gave a delightful talk on public health and Mr. Herbert Badger of the Philadelphia Regional Planning Committee spoke on regional planning.

I. P. P. Hollingsworth, M.D., *Reporter.*

CLEARFIELD—JANUARY

The regular monthly meeting was held in the Nurses' Classroom of the Clearfield Hospital, on the 9th, at 2 p. m., with Dr. G. A. Ricketts presiding. Fifteen members were present.

After hearing the reports of the secretary and treasurer, the following officers were installed for 1930: president, J. M. Quigley; vice-presidents, A. L. Benson and J. E. Ginter; secretary, J. Paul Frantz; treasurer, W. O. Wilson; editor and reporter, H. H. Lewis; censor, A. C. Lynn; district censor, E. L. Jones; delegate to State meeting, W. O. Wilson; alternate delegates, G. A. Ricketts and J. F. Rowles.

After an interesting scientific program the meeting adjourned.

Homer H. Lewis, M.D., *Reporter.*

DAUPHIN—JANUARY-FEBRUARY

The Society met at the Harrisburg Academy of Medicine on the evening of the 7th. There were forty-seven members and several visitors present.

The following officers were elected for the current year: president, D. E. Hottenstein, Millersburg; vice-president, C. P. Faller; secretary-treasurer, E. S. Everhart; reporter, M. H. Sherman; district censor, Hiram McGowan; trustee, J. M. J. Raunick; censor, T. E. Bowman; delegate, J. F. Culp; alternates, J. B. McAlister and P. A. Deckard; delegate, E. A. Nicodemus; alternates, H. F. Gross and J. R. Plank.

Dr. John M. J. Raunick, the retiring president, read a paper on "A Review of Some Interesting Facts Concerning Harrisburg's Health Problems—Past and Present." He reviewed the health problems of Harrisburg, beginning with "the great sickness" in 1792-94, which was, according to his interpretation, a severe type of malarial fever with complicating enteritis. The unhygienic conditions were due to the swampy lowlands, poor sewage disposal, and the old Pennsylvania canal, which passed through the city. Typhoid fever and malaria broke out sporadically and reference is noted of outbreaks of diphtheria with many deaths and of torchlight funerals of "black smallpox" victims during the latter part of the nineteenth century.

The erection of the present Municipal Hospital in 1894 was expedited by a large epidemic of smallpox; 150 cases were cared for there in 1901.

With the dawn of the twentieth century came the rude awakening from apparent lethargy displayed by most people of the community who failed to realize the serious health crisis which confronted the city. Extensive major improvements were advocated so that more than $14,000,000 were spent in these projects during the 1902-22 decades. The installation of the present water filtration plant has reduced the water-borne typhoid fever to nil. This was followed in 1909 by the organization of the Board of Health which, after two years of litigation, secured legislation providing for milk and meat supply inspection. A large epidemic of ice-cream borne typhoid fever broke out in 1916. There were 363 resident cases reported. The influenza pandemic in 1918 attacked 20,000 of the population. There were 475 deaths. In 1910 the diphtheria death rate was 68.3 per cent. Following the intensive administration of diphtheria toxin-antitoxin, during the past four years the death rate has been reduced to nil. Dr. Raunick urged the investigation for the increase of puerperal deaths (4.7 per cent to 11.2 per cent in the last decade). Tuberculosis shows a reduction of more than fifty per cent during the past decade. The housing of tuberculous patients awaiting admission to sanatoria is a problem to be solved.

The local cancer death rate has increased enormously. During the past ten years the increase has been from 55.6 per cent in 1906 to 149.6 per cent in 1928. The feasibility of using the Children's Home at Paxtang, the Tuberculosis Preventorium at Highspire, and the County Home for convalescent and far-advanced chronics should be investigated. With a Communicable Disease Hospital Annex practically assured, it will be interesting to observe to what degree of success communicable diseases can be treated in connection with a general hospital. Periodic health examinations were urgently stressed.

Following the meeting a collation was served.

The February meeting of the Society was held on Tuesday evening, February 4th, at the Harrisburg Academy of Medicine. There were 38 members and several guests present. Dr. Samuel B. Fluke was elected to membership.

The speaker, Dr. J. Moore Campbell, chief of the department of contagious diseases of the State Department of Health, discussed the reason for the varying death rates for several of the more common dis-

cases, and a few of the rarer diseases encountered, in Pennsylvania.

Diphtheria. The death rate in 1906 was 34.1 per 100,000. Due to the administration of diphtheria antitoxin the rate fell progressively from 34.1 to 20.0 between 1906 and 1922. With the advent and widespread use of diphtheria toxin-antitoxin from 1922 to 1928 the rate fell to 8.5. Toxin-antitoxin is definitely credited with this second lowering of the death rate. About one per cent of the cases remain susceptible to diphtheria after administration of the required three doses of toxin-antitoxin and show a negative Schick test. The continued widespread use of toxin-antitoxin is urged.

Scarlet fever. The number of cases is increasing, although many mild cases are not reported. The death rate was 16.5 in 1906, and 2.5 in 1928. Dr. Campbell expects an active immunization against scarlet fever to be developed. At present the immunization is not comparable with that against diphtheria because there is no permanency in scarlet fever immunization.

MATTHEW H. SHERMAN, M.D., *Reporter.*

DELAWARE—JANUARY

The annual meeting of the Society was held in the rooms of the Keystone Masonic Temple at Chester, on January 9th. The following officers, all residing in Chester, were elected for 1930: president, George L. Armitage; first vice-president, Walter E. Egbert; second vice-president, William B. Evans; secretary-treasurer, Albin R. Rozploch; librarian, Ferdinand W. Nyemetz; reporter, William H. Goodman.

ALBIN R. ROZPLOCH, M.D., *Reporter.*

LYCOMING—FEBRUARY

A regular meeting was held on February 14th, at 1.30 p. m., in the Medical Hall of the Williamsport Hospital. Dr. J. F. Gordner of Montgomery, newly elected president, presided.

"The Electrocardiograph in Medicine." By Archibald Cook, M.D., of Williamsport, Pa.—The action of the electrocardiograph depends on the electric currents generated by the contractions of the heart muscle. The electrocardiograph, or string galvanometer, detects the minute heart currents, enlarges them, and records them photographically on a moving film. Dr. Cook explained the mechanics of the instrument, and described the anatomy and physiology of the heart and its conduction system. To illustrate the action of the heart in various pathologic affections, he showed a series of interesting lantern slides of electrocardiographic tracings.

In discussing Dr. Cook's paper, Dr. H. L. Tonkin of Williamsport cited a case which had been previously treated as one of auricular fibrillation, and which by electrocardiographic study proved to be one of extra systole. This meant much to the patient who was advised to exercise judiciously instead of being confined to bed. The question of the myocardium is always of paramount importance in any cardiac condition.

Motion pictures were shown of "The Normal Heart," "The Ectopic Heart," and "The Action of the Heart Valves."

Dr. Wilbur E. Turner of Montgomery reported an interesting case of hypernephroma.

W. EUGENE DELANEY, JR., M.D., *Reporter.*

MONTGOMERY—JANUARY

The regular meeting was held at Norristown, January 8th. The secretary reported a membership of 168 with an average attendance of 36 for the past year. The treasurer reported a permanent fund of $8233. Dr. Remo Fabbri, the retiring president, delivered the presidential address in which he advocated that in the Montgomery Hospital, which is soon to be constructed, the county society secure a meeting hall and adequate headquarters.

The following officers were elected to serve for 1930: president, P. J. Lukens; vice-presidents, J. E. Beideman and A. L. Dewees; recording and financial secretary, E. S. Buyers; corresponding secretary and reporter, W. W. Dill; treasurer, W. G. Miller; censors, P. H. Corson, H. D. Reed, and W. J. Wright; district censor, J. T. MacDonald; delegates, H. A. Bostock and J. N. Hunsberger; alternate delegates, W. J. Wright, J. E. Gotwals, J. K. W. Wood, and E. G. Kriebel.

W. W. DILL, M.D., *Reporter.*

PHILADELPHIA

January 8, 1930

The president, Dr. John A. McGlinn, in the chair.

THE HOSPITAL, THE DOCTOR, AND THE COMMUNITY

"Adequate Hospital Service." By WINFORD H. SMITH, M.D., Johns Hopkins Hospital, Baltimore, Md.—The practice of medicine has changed greatly, with increased amount of knowledge for diagnosis and treatment, with specialization, group clinics and pay clinics, public health organizations, preventive and industrial medicine, and an increase in the number of hospitals. More hospital beds have been provided because it is recognized that many conditions are better treated there and, also, because of the changed living conditions—apartment and hotel life—which necessitate institutional care. A study shows that in 1909 there were only half as many patients cared for in hospitals as in 1928, and that for the 700,000 daily patients today a personnel of 650,000 is maintained and there is an investment in hospital plants of $5,000,000,000. In some localities there are too many hospitals; in others, too few. The whole system is lacking in sound principles for determining where the hospitals shall be, how large, how provided, and under what control. Sixty-four per cent of beds in this country are in federal, state, and municipal institutions; thirty-one per cent, in semipublic; and five per cent, in private hospitals operated for profit. Only twenty-five per cent of the hospitals have over a hundred beds. In 1920, there was one bed for every 340 persons; in 1927, one for every 270 persons; but the distribution is uneven throughout the country. In Wisconsin we find one bed for every 154 persons; and in North Carolina one for every 750 persons. Forty-two per cent of the counties in the United States have no hospital. The states' concern is largely for the insane and the tuberculous, as is the cities'; also, though they usually have, in addition, general hospital beds. In the West, the states provide general beds, but usually the sick poor are left to the private group for care. In the cities, although the city pays for its sick charges, this payment does not cover the cost. Hence, hospitals are constantly begging for funds and they must do so until all free work is taken over by the state and city. Voluntary giving should continue.

The cost of hospital care is a grave concern because of this uncertainty of support and the slimness of the

family purse. The cost of operation of the hospital is increasing, because of a more elaborate diagnostic and treatment methods, requiring expensive equipment, a multiplicity of special diets, an increase in the cost of subsistence items, more expensive drugs, an increased turnover of patients, shorter hours and more elaborate training for nurses (requiring a larger staff, also), larger resident staffs, increased salaries of personnel, the development of smaller units in place of the large wards, the adoption of the social service follow-up, and because all classes must be accommodated. The private patients require hotel standards. These all are legitimate elaborations of service yet the increased cost of hospitals is criticized by the public who misunderstands and has to pay the bills. Criticism by physicians injures public confidence. Recently an eminent surgeon at a symposium in Chicago said the hospitals were showing too much salesmanship and too little humanity, and that they should adopt better methods, whine less and think more, and that they had hired mourners to cry for them and were want to utilize politics. The costs have not increased out of proportion to other costs of living. The Henry Ford Hospital is not self-supporting nor are its costs below the average costs in hospitals of similar type.

The cost of professional care is also causing concern and specialization is causing more and more persons to apply to the hospital for care, for there they can get a thorough examination at a fee within their means. The private-room class has little cause for complaint, but the moderate-means group demands sympathy and more attention is being given them. Since the legitimate fees of specialists are for them impossible, outpatient services are being developed for this group. Although there is weakness in the organization of the hospital system, it is more efficient today than ever before, and it is impossible to standardize here as in business for all factors cannot be brought under control. There is a public demand for a hospital diagnostic clinic. The doctors are concerned, for they are largely responsible for high hospital costs. The clinics are not run in competition, but as an aid to the doctors. An open-door policy is not considered so good as that of a limited and carefully chosen staff. Fifty-nine per cent of the doctors holding hospital appointments have been graduated since 1910. Many think that the doctors' fees are too high. The selection of a doctor is often left to chance, for there is no source of advice. It is questioned, why should surgical operations receive higher fees than medical care? The early hospitals were for the care of the poor, and though they still boast of their free care of the poor there is a shift of emphasis from that group to the self-supporting worker who should receive good service for low cost.

Consider the amount of illness. A fortieth of the life of the average individual is spent in bed, two per cent of the time of the average worker. It has been estimated that in the United States two and a half billion dollars are paid annually for the treatment of disease; two billion are lost in wages; and six billion, in postponable death. Only six per cent of families have an income in excess of $2,000 a year. Less than half the patients in a general hospital pay in full and only a fifth are part pay, but should we disregard the patient who cannot pay? Where will he be treated? The low-wage earner cannot pay as he goes, for he must have his radio, electric washer, auto, etc. Shall insurance be developed? It is useless to argue that people live extravagantly. Illness is not anticipated or budgeted. They face medical charity or financial tragedy. Would the patient of moderate means be able to pay for hospital care if all new policies were adopted? The Massachusetts General Hospital is opening a new 300-bed unit for patients of moderate means ($4-$6.50 a day), but many of these patients cannot pay this cost and the doctor bill. Until cities and states take over the poor they should pay the hospital the actual cost of the sick poor, for this is more essential than parks and boulevards. Organized medicine could do something, for the problems should not be left to those outside the profession. A study of the subject is now being made under the direction of Dr. Lyman Wilbur. Magazine articles are constantly appearing on this subject.

"How, May, and Should the General Hospital Serve the Community Physicians and Their Patients?" Joseph C. Doane, M.D., Jewish Hospital, Philadelphia.—With Dr. Smith, the speaker decries the false publicist who talks without facts. The institution which best serves the community serves also its physicians. Expensive and complicated apparatus is required. Public moneys should carry more of the totally free load. The staff treats free cases and in return gets the use of the hospital's equipment for private cases. A well-equipped, modern plant is owed the community. An intelligent public will question the right of an inferior institution to exist. The number of physicians should not be too closely restricted, but enlarged by a courtesy staff. Of the 120,000 physicians in the United States, 90,000 are connected in some capacity with a hospital. The problem of an open or closed hospital, therefore, is not so serious as implied. A multiplicity of staff appointments of one individual is dangerous. Departmentalizing varies with the size of the hospital and the community. Nearly half of our hospitals are in towns of ten thousand or less. Many defects are more far-reaching than is often supposed by the visiting physician. A central city information agency to inform physicians of the number and type of hospital beds available daily would be desirable. The hospital owes the community adequate provision for all grades of patients and should be flexible in its physical accommodations.

While Christmas clubs may be formed with ease there is great difficulty in popularizing the Rainy Day Club. Such accommodations as the Massachusetts General is providing are much needed. The question often arises whether or not the physician should be allowed to charge ward patients. In Philadelphia, he is not permitted. Questions arise, also, over charges for compensation cases. Diagnostic clinics are needed, for there are not sufficient facilities in the average physician's office for a complete examination nor has he time to make it. Do hospitals mitigate the best interests of the physician? Hardly, for reference by the family physician is usually required and information is given only to the physician. It has been alleged that they shake the confidence of the patient in the family physician. This should not be true if they practice fair play. A hospital should maintain educational activities in the outpatient department, with preventive and follow-up work, and a contribution of research is owed to the community. Intrigue, subterfuge, and plotting have no place in the hospital.

"Is the Cost of Hospital Care Increasing?" Mr. John M. Smith, Hahnemann Hospital, Philadelphia.—This subject presents three aspects: change in requirements, costs to the hospital, and costs to the patient. The best care of twenty-five years ago would be laughable today. Then, pathology was the sole laboratory branch and it was very simple. Today all patients must have the benefits of modern developments in medicine—

x-ray, electrotherapy, electrocardiograph, physical therapy, occupational therapy, etc. Twenty-five years ago there was one nurse for every six patients; today there must be one for every two patients and a personnel of one for every patient. In forty-nine hospitals with 1466 beds there are 900 beds at $4 to $8 a day; and 1026 beds at from $3 to $4.50 per day; as well as 4659 beds at from $3 to $3.50 per day. Although these last are for pay and part-pay patients, seventy-five per cent were free in Philadelphia. In private and semiprivate rooms, there were 6800 patients cared for; in public ward beds, 119,000 were cared for. In 1919, the cost for maintenance of a group of thirteen hospitals was $5,000,000; in 1929, it was $13,500,000. In the corresponding period there was an increase of sixty-eight per cent in the general cost of living. In 1913, the average cost per patient was $2.30; in 1929, it was $4.31. Patients have changed in type. There is in the country greater prosperity and low-priced private care is desired. In 1919, ten per cent were cared for in semiprivate beds; in 1929, twenty-three per cent. In 1919, the average stay was eighteen days; in 1929, twelve days. In 1913, the average charge was $5 per day; in 1929, $7.50. In 1913, the average total expense to a private patient was $105; in 1929, it was $93, for the patient can go back to work six days sooner. Sickness at home, with the care of skilled nurses, costs more than at a hospital. Of every $2000 required for maintenance, the patients pay $572; the state, $93; endowments, $154; welfare federation, $141; and there remains a deficit of $40. The state pays part of the cost of the free patients and the welfare federation helps some. Ward patients receive all essential care, private patients this plus luxuries. To care for the middle class, we should secure endowments or subsidies; or group accident and health insurance should be developed. Unfounded criticism arises because sickness is an irksome expense, people desire luxuries, they immortalize the good old days, and they are ignorant of costs. Hospitals have kept up with the demands of modern medicine; the cost has increased only fifty per cent. Endowments and insurance must be secured.

"The Outpatient Work in a General Hospital." By Thomas J. Ryan, M.D.—When we consider that a million patients were treated in dispensaries of Philadelphia last year, we can see that no hospital could be operating in competition with the practicing physician. In 1786, the first dispensary was opened in Philadelphia for the treatment of the sick poor. Now the teaching of students is an important factor in the stimulus for dispensaries. In 1905, the first of the now numerous tuberculosis clinics was opened, and there was a militant endeavor made to check a public menace. So with the work in infant mortality, venereal disease, and mental disease. The modern clinic, therefore, serves a triple purpose: charity, education, and public health. A study of social conditions, of character under adversity and the influences that mold it, should be made, and the environment should be studied and remedied by a supervising philanthropy. Abuse of the dispensary occurs less frequently than the physicians' bad pay cases, being estimated at from two to ten per cent. Sixty per cent of our families have monthly incomes of from $60 to $100; twenty-eight per cent, up to $200; eight per cent, from $201 to $250; two per cent, from $250 to $300. We must consider the relation of income to the cost of medical attention, the size of the family, loss of work, current expenses, etc. Although the deficit in the outpatient department of the Misericordia Hospital for a year was $15,713, that of the wards was $56,000, so the outpatient work saves a larger deficit. This loss of $6000 a month must be met, with no help from city or state. Preventive medicine may be given at a loss to the hospital, but it is of definite service to the community. Studies of eligibility of outpatient applicants show it is not abused.

Dr. Reese, of Shamokin, said that from eighty to ninety per cent of the illness of the country can be cared for by the *family physician.*

January 22, 1930

Crile Night

"The Influence of the Thyroid, the Adrenals, and the Nervous System on the Production and Treatment of Peptic Ulcer." By George W. Crile, M.D., Cleveland, O. (by invitation).—Changes in the gastro-intestinal tract, and especially in gastric acidity following thyroidectomy, drew the speaker's attention to this subject. The first clinical sign noted was a resemblance between the background in hyperthyroidism and in hyperacidity, that is, characteristics, ability, abnormal intellectual activity, high scholastic standing, and intensive personality. Though these individuals before operation are on the verge of a breakdown, they become well after operation. Hyperthyroidism does not occur in the lowest class of humans, in the drifters or the lazy, nor is it found among the lower animals. This also is true of peptic ulcer. So in one family, the sisters have hyperthyroidism; the brothers, peptic ulcer. Probably the highest incidence of peptic ulcer is found among successful young surgeons, and doubtless there are many peptic ulcers present in every medical gathering. How does this background of worry, work, and fatigue produce peptic ulcer?

All living things exist in cells. The power of the cell to do work is due to the relation of the concentration of the electrolytes and the permeability of the cell membrane, which constitutes the potential. We have a specific agent to govern the permeability of the cells films; namely, the iodin compounds or thyroxin or thyroid extract. The effect of this increase in permeability is increased oxidation. Since the same symptoms are produced by the administration of thyroid, of adrenalin, or upon stimulation of the nerve, it was thought that these last two, also, would increase the potential, but instead there was a sudden fall. The adrenal gland and the nervous system constitute the means by which the potential is used for growth or work. In artificially produced myxedema, it was found that the potential fell close to zero, hence less growth, less function, less work, which is typical of that condition. In hyperthyroidism, the thyroid merely builds up potential, use of which is made by the nervous system, reinforced by adrenalin. In hypothyroidism, even adrenalin has little effect. In hyperthyroidism there are six ways of precipitating a crisis through the influence of adrenalin: (1) emotion; (2) pain and injury; (3) infection and foreign protein; (4) inhalation anesthesia; (5) hemorrhage and asphyxia; and (6) adrenalin. The thyroid gland in excess activity includes increased activity of every cell of the body. The digestive tract is specifically accelerated. Experiments were made upon dogs to demonstrate the relation between hyperthyroidism and peptic ulcer. The stomach is acid, the intestine alkaline: there is a definite, measurable potential between the two. With one electrode in a stomach pouch and one in an intestinal pouch it was found that the potential (as did the free hydrochloric acid and total acidity) rose during a meal; on administering large doses of thyroid the curves all increased; on producing myxedema, the

curves fell; with psychic disturbance, the potential disappears and adrenalin wiped out the curves. When the potential falls to zero there is dissolution of the cell. A sudden loss of potential in the midst of digestion decreases the power of cells to maintain themselves, and as a result of the pressure of hydrochloric acid there ensued an ulcer. Clinically this theory and experiment is borne out by the benefit obtained by the reduction of acidity of the stomach. Postoperative recurrence of gastric ulcer occurs at the suture line—where acid meets alkaline medium. Against this hypothesis is offered that of embolus and infection, but an embolus would hardly select the acid-alkaline line. There is a definite relation between excitement and fatigue and errors of diet and ulcer. The blood stream in the stomach wall is neutral or alkaline, further establishing cross currents. The large bowel tends to be acid and here is found ulcerative colitis, while in the alkaline area (the small intestine), is found an immunity to such ulceration. In cases of resection of the stomach, in an attempt to reduce the acidity of the stomach, recurrences of ulcer are not so common. In the Pavlo pouch, direct stimulation with a constant current with the negative pole in the stomach one can build up acidity at will, or by reversing the poles, cause alkalinity. If then the control of the acidity of the stomach is under the control of thyroid, adrenals, and nervous system, might we not venture to attack the ulcer from one or more of the organs governing it?

A brilliant student, who had had peptic ulcer for twenty-nine years, had long been under Sippy's care. He had had a gastro-enterostomy with recurrence, and second operation by an authority, with recurrence. He had a thyroid heart with auricular fibrillation but no change in the basal metabolic rate, no hyperthyroidism, and was entirely relieved by thyroidectomy. Seven cases in all, to date, wherein surgical and medical measures have failed, have had the left adrenal and the thyroid gland in considerable amount removed, with relief of the ulcer. After the adrenal is removed the high acidity of the stomach falls to normal and immediately the patient can eat grapefruit, salads, melons, etc., which he could not eat previously. This subject is not presented as a cure for peptic ulcer or as a new method of attack, but is offered as a discussion of the suggestive background in peptic ulcer and a line to be followed in cases despaired of in medical and surgical treatment.

In discussion, "from the physiological standpoint," Dr. Edward Lodholz said he appreciated Dr. Crile's enthusiasm, the method of presentation of his subjects in the indicative rather than in the conditional or subjunctive moods. Dr. Crile, he said, had always been an interactionist, realizing the stresses and strains in the body, and in this paper considers these from the electrolytic standpoint. He would differ from Dr. Crile slightly regarding the essentialities in the body. In regard to the adrenal, is the medulla an essential structure or not. It has no integrative function. The cortex is essential to life. Dr. Crile, he believes, elevates the functional element of the medulla. There is in the body a factor of safety, a reserve, in the kidneys, the circulatory system, and possibly in some of the endocrines. This is used with age until there is quantity sufficient for maintenance only. Is it not, therefore, possible that removal of the suprarenal takes away the physiologic reserve and thereby shortens life? Physiologists are inclined to believe that there is an all or none law in the adrenal. Suppose then that the activity of the thyroid is reduced and the other adrenal is correspondingly reduced, the function may easily go below normal—and administration of adrenal extract has not been successful.

"From the medical standpoint," Dr. William Egbert Robertson said that he differs from Dr. Crile on the clinical side, because of the difficulty in diagnosing ulcer. From the physiologic or chemical standpoint his work bears no question. Differential potential is necessary for every cell activity. His work evidences a knowledge of physiology and chemistry and their application to surgery. The cell membrane is not merely a sieve but exhibits electrical phenomena as well, which explains action and injury currents. The cell becomes more complicated in higher animals. Vagotonia and sympathicotonia were demonstrated in 1910, by the use on successive days of adrenalin, atropin, and pilocarpin. While Dr. Crile's paper merits careful thought, Dr. Robertson is unable to approve the surgical procedure advised. Edema, hemorrhage, necrosis, and ulcer have occurred in animals after removal of the adrenal and it has been shown that adrenalin deficiency is a possible factor in the production of gastric ulcer. Section of the median splanchnics causes gastric necrosis. The cause of peptic ulcer in the human is still not definitely known and symptoms are often entirely wanting. There is usually a reasonable doubt of the diagnosis, and we may have symptoms in anemia and tuberculosis resembling those of hyperthyroidism. Syphilitic and tabetic ulcers also should be differentiated. Because of the uncertainty of diagnosis and our ignorance of the cause of peptic ulcer, the speaker is unable to approve of the surgical procedure recommended by Dr. Crile.

"From the surgical standpoint," Dr. Harold L. Foss, Danville, Pa. (by invitation), said that an occurrence of multiple perforating ulcers are found in the duodenum of animals, with evidence of malignancy in the thyroid. Adrenalectomy or partial thyroidectomy may cause gastric ulcer. Many reports have been given of gastric ulcer with hyperacidity cured with preparations of endocrin glands. Undoubtedly stress and strain and nervous tension are the cause of the increasing frequency of peptic ulcer, and the analogy between these and hyperthyroidism has frequently been drawn by Dr. Crile. Acid gastric juice is a secondary but necessary factor. We have heard of the hypothesis of Dr. Crile that electricity is the vital force which organizes and maintains life, but it fails to apply to the gastric ulcers which occur on the positive side of the acid line. He questions. Dr. Crile, therefore, whether or not the amount of difference in potential is not extremely minute; why is not the whole mucosa eroded; how account for the conditions found high in the cardiac end; why is there no necrotic change in muscles wherein there is a difference of potential; how account for the reach between the gastroduodenal secretion and the other electrode. Years ago the adrenal was advanced as the agent in hyperthyroidism but adrenalectomy was not satisfactory. A change in potential may occur between two acid media. The ideal method of treatment is rest, regulated exercise, good nursing, change of scene, iodin, sodium bicarbonate, and a year for the cure. The surest and most permanent relief to be had quickly is through excision, gastro-enterostomy, or thyroidectomy. Although there are interesting results in these seven cases reported by Dr. Crile, a longer series with follow-up will be needed before it becomes the method of choice.

In conclusion, Dr. Crile admitted that Dr. Lodholz had found the weak points. Removal of the adrenal connotes destruction also of eighteen nerves. Fifty-three adrenals have been removed by him, the first sixteen years ago, with no failure so far of the reserve.

With Dr. Robertson, he would not propose the new method as a general treatment for ulcers. It is a process being tried out on patients to whom medical and surgical masters have given little hope. A follow-up on the surgery of peptic ulcer reveals twenty-five per cent unsatisfactory, and surgeons themselves hesitate to undergo gastro-enterostomy, holding closely, tightly, and secretly to their own ulcers. He hopes to pin the exciting cause upon hypcracidity and will stop his procedure on the first failure. One cannot be quite sure of the application of the results of animal experimentation. As to Dr. Foss' queries, especially, why is not the whole mucosa destroyed? The cells are hooked up in parallel. The wall of a cell is $\frac{1}{2,500,000}$ cm. thick, and the amœba, with twelve millivolts of potential, is destroyed by reducing the potential to zero. Peptic ulcer results from the cell, plus the speed-up mechanism (thyroid), plus the discharge mechanism (adrenal). The training of an individual can go far toward the control of his emotions.

MARY A. HIPPLE, M.D., *Reporter.*

WARREN—JANUARY

The monthly meeting of the Socicty, held on the 21st, was attended by thirty active and two honorary members, a record attendance.

Dr. Ira A Darling was elected president and Dr. Hamblen C. Eaton reëlected secretary-treasurer for 1930. The reports of the secretary and the retiring president showed that the Society had a very active year; that the programs had been carried out without a failure; and the average attendance, over twenty-four.

Dr. G. E. Bennett, of Corry, gave an account of two deaths attributed to contact with a parrot. The parrot, a recent importation, had died, and following this two adults in the family were taken sick with symptoms of pneumonia and died after a short illness. Although the evidence is not conclusive that these were cases due to the bacillus psittacosis, the contact with the diseased parrot warranted the diagnosis.

A banquet was served following the meeting.

M. V. BALL, M.D., *Reporter.*

WASHINGTON—FEBRUARY

The officers of the Society who were elected to serve during 1930 are: president, H. J. Repman; vice-presidents, F. I. Patterson and Edwin McKay; secretary-treasurer, C. C. Cracraft; librarian, George B. Woods; district censor, J. H. Corwin; reporter, C. A. Crumrine. The meeting was held in the Washington Hospital on the afternoon of February 12th. The subject for discussion was rheumatism and the guest speaker, Dr. Paul Trnavsky of the University of Pittsburgh, lectured on "Focal Infection from a Dental Patient's Standpoint." The Dental Society of the county was invited to attend this meeting.

C. A. CRUMRINE, M.D., *Reporter.*

WESTMORELAND—JANUARY

The stated meeting of the Society was held on the 7th. The retiring president, Dr. C. C. Crouse, read a paper on "Hand Infections," which was illustrated with motion pictures.

The new president, Dr. R. C. Johnston, presented a paper on "Control of Cancer of the Cervix from the Standpoint of the General Surgeon."

DR. JOHNSTON: The success of the cancer-control campaign depends upon the efforts and coöperation of each and every member of the medical profession.

As a general surgeon confronted from time to time with carcinoma of the cervix, knowing well that panhysterectomy has largely in many clinics passed on or been superseded by new, progressive, and advancing therapy, one must ponder how he can best do his bit in helping to reduce the mortality rate of 100,000 per year who die of carcinoma beginning in the cervix.

Sequela of childbirth must be considered one of the most predisposing agencies. It is our duty, when a female patient is referred for surgical care, to routinely examine the pelvis and assure ourselves that no existing disease is present which could have any part in relation with the pathologic condition apparently paramount at the time of consultation. If nothing is found, and malignant disease becomes a later issue, we are free from criticisms or negligence. Any suspicion or manifest evidence of cervicitis should have a biopsy, with prompt and careful section, rather than to return the patient to her medical adviser with a detailed letter suggesting this or that be carried out. This entails loss of valuable time, incompetency frequently, and later rightful censure. As no well-defined early symptom of malignancy is ever found, it is not unusual for patients to appear with developed growths, who have had or are having local applications for the so-called ulcerated cervix, because blood-streaked leukorrhea prompted them to consult their medical adviser.

How can we as general surgeons coöperate in the control and prevention of cancer of the cervix? By joining forces with the obstetricians and gynecologists and urging our clientele to insist on a follow-up system, stressing the importance of a postpartum examination at the end of three months of every patient cared for during childbirth. A healthy involution should show complete epithelization. Granulation at this period means cervicitis in one of its many forms, and should be under proper treatment until healthy healing is complete.

Chemical applications are ofttimes a precursor of serious sequela and are seldom permissible. The use of the electric cautery knife is positive, safe, time saving, and without morbidity. It can be done in the office with a reasonable amount of skill and dexterity. If hemorrhage follows the puncture of cervical cysts, the area should be excised and examined. Reviews of cases so treated, appearing in literature, tend to show that carcinoma develops infrequently in patients who have received cautery destruction of the gland-bearing area. It would appear logical during the prenatal period to prepare the cervix for the forthcoming ordeal with cautery puncture of all glands showing pathologic changes. It is possible that many low-grade infections with local or metastatic manifestations would be averted were cautery puncture carried out.

As the physician who pictures in his mind the crater-like or cauliflower growth of the cervix as a diagnostic sign of cervical cancer will not pass on for perhaps several decades, a foreword by those famliar with progressive achievements in this field is an imperative duty, if we are to fulfill our responsibilities as disciples of cancer control. The campaign being waged is bringing an increased number of patients at an earlier period and thus we should be equipped to render definite diagnosis. Any case coming under observation with a history of any departure from normality of reproductive organs should be held under suspicion. A patient previously free from any discharge, who presents herself with a history of so-called dish-water discharge or

slight hemorrhagic spotting should be held potentially malignant until a biopsy is done.

The methods of examination properly evaluate the symptoms only when properly executed. Inspection through a bivalve speculum has little to commend it and much to condemn it. Tension is produced, anatomical relation distorted, and fear, as well as pain, brought to the timid patient. Touch or palpation gently carried on conveys mobility and flexibility, roughness or smoothness of the vaginal tract and contents, rigidity of ligaments, changes in contour, position, single or multiple tumors or indurated areas, and painful areas of mobilization, in fact tells nearly all you want to learn. Careful rectal palpation is always of great importance. It can always be done easily by insisting that the patient force down as in act of defecation, when a finger can be introduced without pain. The iliac glands can be sought for and found, if involved, retrovaginal separations determined, and indurated and tender areas fixed. With the touch technic completed a vaginal speculum may be introduced, and the cervix inspected; the cervix touched—not mopped—with a cotton pledget on sponge forcep and the type of bleeding noted. Carcinomatous bleeding is always arterial and continues even when ten-per-cent cupric sulphate is applied, while bleeding from erosions or eversions usually ceases promptly. A dense indurated cervix beyond a healthy appearing external os should be oriented with a probe under proper sterilization and the bleeding studied, if any occurs.

With an early diagnosis made and confirmed, how should a patient be advised? First, she should not be told she has a malignancy. I tell her a new growth or tumor is found and, as she has read of our efforts to control cancer, that she might be a victim, if this tumor is not removed. Today two methods are considered. If no adnexal disease complicates the situation, I advise the use of radium by a competent gynecologist, if you have had no personal experience or training in its application. In my limited experience, more success has been found in the end results over a period of ten years by this procedure. Adnexal disease complicates very seriously its use. Surgery applied along lines of Wertheim, if possible, gives better results even with a high mortality rate. In cases in which the disease has escaped the confines of the cervix and invaded the vaginal walls, rectovaginal septum, and broad ligaments, radium is the only therapy we can offer. From time to time one will be surprised with results obtained, and an occasional five-year cure secured.

Throughout the year let us trust that every member of this Society will quicken his activities in every department of his professional activities. This can be accomplished by attendance at his county, State, and national societies, with visits to clinics in special lines in which he is most interested, not forgetting that a well-rounded specialist and general practitioner have a working knowledge of many subdivisions of medicine. Fulfilling this, medicine and surgery in Westmoreland County will be second to none in the State.

C. C. Baldwin, M.D., *Reporter.*

YORK—JANUARY

Sixty-six doctors attended the meeting which was held, January 2d, in the Yorktowne Hotel, and followed by a banquet. The following officers for 1930 were elected: president, J. Fletcher Lutz, Glen Rock; first vice-president, R. E. Butz, York; second vice-president, T. A. Lawson, Dallastown; secretary, P. A. Noll, York; treasurer, B. W. Shirey, York; reporter, M. H. Cohen, York; editor, C. L. Fackler, York; librarian, W. F. Gemmill, York; censor, H. R. Lecrone, York; and trustee, H. B. Baird, York. The retiring president and the newly elected president delivered short addresses.

The principal speaker of the evening was Dr. Ross V. Patterson, president-elect of the State Medical Society. He traced the medical history of Pennsylvania and showed how this State has always led in the field of medicine. The first medical school in America was the University of Pennsylvania Medical School and the first hospital was the hospital connected with the Philadelphia almshouse. Dr. Patterson asserted that through the years the medical men of Pennsylvania have been the leaders of their profession and in the present day the State Society has a great opportunity to continue this leadership by fostering a new medical practice act, which will be a model for other states. Revision of our present medical legislation is sadly needed, for times have changed and new problems must be met. Too much attention is being paid to the cults and illegal practitioners, when the greatest menace is the inefficient licensed quack in our own midst. As a whole, however, medical conditions are not so bad. The average physician is fairly prosperous and happy, the schools are turning out better men every day, patent medicine advertising is on the decline, and the cults are dying of their own inefficiency. Much of this improvement is due to organized medicine, the State Society, and the American Medical Society. These should receive the support of every member of our profession.

Milton H. Cohen, M.D., *Reporter.*

The Woman's Auxiliary to the Medical Society of the State of Pennsylvania

Mrs. Wilder J. Walker, *Editor*
546 South Street, Greensburg, Pa.

THE MONTHLY MESSAGE OF THE PRESIDENT

Dear Auxiliary Members:

One of the most important steps ever taken by women in volunteer public health work was taken last month by the National Auxiliary in the publication of the first of its series of Study Envelopes for county auxiliaries. About half of our Pennsylvania auxiliaries have already seen this first envelope and agree with my estimate of its value, but for the benefit of those county auxiliaries visited before the publication of the Study Envelopes, I shall give their salient points.

The series will consist of eight programs, covering the next two years. Each program will be devoted to one particular aspect of volunteer health work suitable for a county auxiliary to take up, and all the material is approved by our National Advisory Committee, of which Dr.

Olin West is chairman. This insures its being correct in its statements and feasible in its operation, and will carry weight with our few still doubting Thomases.

The first study is entitled "The Most Common Defects in Children—Their Effects—What is Being Done to Overcome Them?" Think that title over for a moment and you will see what a tremendous field it opens up. And the wonderful thing is, that one is not left to flounder about in a Slough of Despond, vainly seeking an answer, but is led on, step by step, to the terra firma of definite knowledge.

On the outside of the envelope is printed a series of questions indicating the line of investigation, and inside are six sheets outlining the subject as a whole, showing the relation of child defects to the well-being of the whole community, not only as regards health, but also in educational and business progress.

Statistics follow, showing the plan of campaign and the concrete results of three years of concentrated effort to correct the common defects of childhood, statistics so startling that even a lazy man would feel impelled to lend his aid! Across the page, 5-, 6-, and 9-point children dance, until one thinks himself in the midst of the Milky Way! The outline ends with a bibliography for those desirous of delving more deeply into the subject.

This program is so concrete, so practical, so definite, so simple, that it lends itself admirably to auxiliary work. One question might be assigned in advance to each member in turn, to be answered at the next meeting, which might be turned into a symposium, all members free to discuss the subject from different angles. In this way, all will have a share in the presentation of the program, all will benefit by the study of the others, and above all, all will have an opportunity to catch the wonderful vision of the women to whom we owe this magnificent piece of work, our National President, Mrs. George H. Hoxie of Kansas City, and our National Chairman of Public Health Education, Mrs. E. V. DePew, of San Antonio.

Those who have not yet seen these Study Envelopes may obtain them free through our State Chairman, Mrs. J. Newton Hunsberger, 514 West Main Street, Norristown. Needless to say, I have asked to have them sent to all our ten District Councilors, to Dr. Sharpless, Dr. Patterson, Dr. Donaldson, Dr. Appel, Mr. Funk (head of the Bureau of Public Health Education under Dr. Appel), Dr. Hammond, Mrs. Walker, and to the five members of our State Advisory Committee.

You may be interested to know that the Philadelphia County Medical Society has invited the Philadelphia Auxiliary to use two of its weekly broadcasting periods. The first will be on Tuesday, March 11th, at 9.20-9.30 p. m., when Mrs. Wilmer Krusen, president of the Philadelphia Auxiliary, will speak on the all-day Health Institute to be held by the Auxiliary at the County Medical Building on Thursday, May 8th. The second broadcast will be on Tuesday, March 18th, at the same hour, when your president will speak on the National Health Study Program. Both broadcasts are over Station WFAN, Philadelphia.

In closing, let me remind you that May is our Health Month, and that the subject of mental hygiene is the last word in public health work. Dr. J. Allen Jackson, State Hospital, Danville, is head of the Committee on Mental Hygiene of the State Medical Society, and has a large corps of interesting speakers who will go anywhere without charge for whole or part programs. Let us tax Dr. Jackson's resources to their limit.

Faithfully yours,
CORINNE KEEN FREEMAN, *President.*

PRESIDENTIAL PEREGRINATIONS

January 27—Reading, Meeting Berks County Auxiliary.
January 28—Pittsburgh, Conference with Chairman National Convention Committee; Meeting Allegheny County Auxiliary.
January 29—Conferences with State Officers.
January 30—Butler, Meeting Butler County Auxiliary.
January 31—Philipsburg, Meeting Clearfield County Auxiliary.
February 1—Somerset, Meeting Somerset County Auxiliary.
February 2—Johnstown, Conferences on State Convention.
February 3—Johnstown, Meeting Cambria County Auxiliary.
February 4—Greensburg, Meeting Westmoreland County Auxiliary.
February 5—Waynesburg, Meeting Greene County Auxiliary.
February 6—Uniontown, Meeting Fayette County Auxiliary.
February 7—Altoona, State Board Meeting; Dinner dance, Blair County Auxiliary.
February 8—Huntingdon, Conference with State Treasurer.
Lewistown, Meeting Mifflin County Auxiliary.
February 12—Austin, Meeting Potter County Auxiliary.
February 13—Wellsboro, Meeting Tioga County Auxiliary.
February 14—Williamsport, Open Meeting of the Lycoming County Auxiliary and the Women's Club.
February 15—Lock Haven, Meeting Clinton County Auxiliary.

February 18—Greencastle, Joint Meeting of Franklin County Medical Society and Woman's Auxiliary.

In all these visits, your president has been the recipient of the kindest hospitality, both private and official, and she is glad to take this opportunity to make formal and public acknowledgment, and to express her deep appreciation.

The tour of the thirty-four organized Auxiliaries is now practically complete, and your president can only hope that she may have left behind with them some small measure of the inspiration she has received. To have come in contact with these groups of outstanding women is one of the great privileges of her life.

COUNTY AUXILIARY REPORTS

Allegheny.—Medical night at the Pitt, Monday, February 3d, 1930, was for the Medical Student Loan Fund. The fund is being used right along, and I wish you had heard the committee's last report. The play was a comedy called "Jonesy," and Robert Williams was the guest star. He is young, but is beginning to attract notice in New York, so he must be good.

Blair.—The regular business meeting was held at the Penn Alto Hotel, January 28th. Yearly reports of the officers were read, and the election which took place at this time resulted as follows: president, Mrs. August Kech; first vice-president, Mrs. Frank Miller; second vice-president, Mrs. Homer Miller; secretary and treasurer, Mrs. Elwood Stitzel.

The auxiliary sponsored a dinner dance, February 7th, at the Penn Alto Hotel in honor of the State Executive Board which met here. A musical program in charge of Mrs. Herbert Thomas was given during dinner, which was served in the Logan room. A color scheme of red and white was carried throughout the room. State officers, members of the Blair County Medical Society, and members of the auxiliary attended the dinner, after which there were cards and dancing. Mrs. A. S. Kech, president of the auxiliary, presented the following speakers: Mrs. J. Newton Hunsberger, Norristown; Mayor John J. McMurray; Mrs. Walter J. Freeman, president of the State Auxiliary; Dr. Walter F. Donaldson, Pittsburgh, Secretary of the State Medical Society; Dr. Howard C. Frontz, Huntingdon; Dr. Joseph Meyer, Johnstown, president of Cambria County Medical Society; and Dr. Salus, Johnstown.

Among members of the Executive Board present were, Mrs. Howard G. Frontz, Huntingdon; Mrs. Wilder J. Walker, Greensburg; Mrs. W. Wayne Babcock, Philadelphia; Mrs. Joseph Meyer, Johnstown; and Mrs. Edward Pardoe, South Fork.

Chester.—The January meeting was held in conjunction with the Chester County Health and Welfare Council. The program was made up of five excellent sessions: "Public Health," Dr. Everett Barr; "Recreation, Parks, and Drama," Judge S. F. Northrup; "Social Work," Karl de Schweinitz; "Library," Miss Anna A. McDonald; "Financing Community Programs," Mr. Allen T. Burns. A dinner program followed with Dr. Haven Emerson of Columbia University and Colonel Price Wetherill as speakers.

The new officers are as follows: president, Mrs. Walter Webb; vice-president, Mrs. W. T. Sharpless; secretary, Mrs. Joseph Scattergood; treasurer, Mrs. Howard Mellor.

Clinton.—The annual meeting was held at Hotel Fallon, Lock Haven, January 23d, at 4 p. m. Dr. W. T. Sharpless, president of the State Medical Society, gave a short talk and urged every member to have an annual health examination; also to go to the State Convention and take their husbands. He also gave a talk on *Hygeia*.

The new officers for 1930 are: president, Mrs. D. W. Thomas (Lock Haven); vice-president, Mrs. S. J. McGhee (Lock Haven); second vice-president, Mrs. W. E. Welliver (Lock Haven); secretary-treasurer, Mrs. W. J. Shoemaker (Lock Haven); directors, Mrs. J. L. Lubrecht (Lock Haven), Mrs. A. B. Painter (Mill Hall), and Mrs. J. E. Tibbins (Beach Creek).

Dauphin.—At the annual luncheon meeting held at the Civic Club the following officers were elected: president, Mrs. Jesse L. Lenker; vice-president, Mrs. D. E. Hoff; recording secretary, Mrs. Maurice I. Stein; corresponding secretary, Mrs. Samuel F. Hassler; treasurer, Mrs. J. W. Shaffer. The nominating committee comprised Mrs. J. R. Plank (Steelton), Miss Mary Reckord, and Mrs. Geo. W. Widder.

Mrs. Walter Jackson Freeman of Philadelphia, State president, was the guest speaker of the afternoon. Mrs. Freeman urged the auxiliary to stress in its work for the coming year the importance of helping the doctors and dentists in encouraging the work of the dental hygiene and public health program, of which Dr. Theodore B. Appel, State Secretary of Health, is the director. The State society has set aside the month of May for an extensive campaign on the periodic examination.

Mrs. Theodore B. Appel, wife of the State Secretary of Health, outlined the work that was being done on the periodic examination by the district councilor and complimented the auxiliary on its efficiency. A detailed report of the work done by the auxiliary during the year was given by the chairman of the standing committees.

The retiring president, Mrs. C. R. Phillips, recommended that (1) periodic health examinations should become the habit of all members; (2) each year a sum of money should be sent to the Medical Benevolence Fund; (3) each year a certain sum of money should be set aside for use at conventions and tri-county meetings when held in Harrisburg; and (4) always the county societies should conscientiously endeavor to accede to the requests of the State president.

Erie.—On January 16th, the following officers were elected: president, Mrs. J. A. Stackhouse; first vice-president, Mrs. Norbert Gannon; second vice-president, Mrs. F. E. Bowser; corresponding secretary, Mrs. H. E. McLaughlin; recording secretary, Mrs. Benj. Goldman; treasurer, Mrs. John A. Darrow.

On February 3d, at the home of Mrs. Charles A. McNeill, a short business session was followed by a musical and tea.

Mrs. Frank E. Bowser reviewed the book *Devils, Drugs, and Doctors* by Howard Haggard, M.D.

Lackawanna.—A delightful and successful bridge tea was given on the afternoon of January 24th, at the Green Ridge Club, the proceeds of which will be given to the Medical Benevolence Fund. Tall yellow tapers and a silver bowl of calendulas were used to decorate the tea table.

Mrs. I. W. Severson, first vice-president, recently entertained the directors and officers at luncheon at the Deitrick.

Lancaster.—Twenty-two members attended the meeting on February 5th, at the home of Mrs. Kearney Smith. Three new members were accepted: Mrs. Taylor (Columbia), Mrs. Snyder (Mt. Joy), and Mrs. Hamaker (Lancaster).

Our vice-president, Mrs. Keylor of Leola, read an interesting paper on "Educational Problems," by Dr. J. Bruce McCreary, Deputy Secretary of Health.

Lehigh.—The December meeting was held at the home of Mrs. Fred Bausch, at which time our State president, Mrs. Freeman, was entertained. The regular business meeting and election of officers took place. The new officers are as follows: president, Mrs. Charles R. Fox; vice-president, Mrs. T. H. Weaber; recording secretary, Mrs. Warren Peters; financial secretary, Mrs. C. H. Trexler; corresponding secretary, Mrs. A. M. Peters; treasurer, Mrs. Paul Ramer. After an interesting talk by Mrs. Freeman, tea was served.

The January meeting was held at the Hotel Traylor and the new officers were installed. Annual reports were given and new committees were appointed.

Philadelphia.—The auxiliary met Tuesday, January 21st, in the auditorium of the Society Building. Mrs. Wilmer Krusen presided.

Mrs. Samuel Bolton, chairman of the legislative committee, gave an interesting report. Mrs. W. B. Odenatt, chairman of medical welfare, and Mrs. J. M. Fisher, associate chairman, and their committees have planned two card parties, February 25th and April 30th. Please reserve these dates and support the auxiliary. Details will appear later.

Mrs. Myer Solis-Cohen, representative on the Mayor's Committee for "Cleaner Philadelphia," reported the material for the survey of making "Spruce Street, spruce" from 12th to 22d is being collected and is anxious that free motion pictures be shown to educate the public. The *model mile* will soon show improvement, for Mrs. Cohen is earnest and coöperating with the agencies. Complaints of "vile odors" during the night should be reported to the Department of Health (Locust 0290), and say that a physician's family is complaining.

The $5.00 annual subscription to the American Red Cross and $50.00 to the Library Committee of the Philadelphia County Medical Society for current magazines were authorized.

The following chairmen were appointed: Hygeia, Mrs. O. H. Petty; medical welfare, Mrs. W. B. Odenatt; associate medical welfare, Mrs. J. M. Fisher; membership, Mrs. W. E. Parke; publicity, Mrs. C. C. Biedert; public health, Mrs. E. S. Dillon.

Mrs. M. G. Tull, chairman of program, presented the speaker, Mrs. Samuel P. Weinberg who told of "What the Philadelphia Section Council of Jewish Women Have Contributed to the City Welfare and Communal Activities." This group of women is rendering noteworthy service and among the outstanding features of their work are the requests to the motion picture industry not to deprive the deaf of the pleasure they had before the talkies were introduced; the reading to the blind in order that they may continue their studies, thereby becoming self supporting; and their intense interest in immigrants and prisoners.

Plans are being prepared for "A Health Institute to be held on Health Day," to which women's clubs are to be invited.

A social hour followed, with Mrs. W. E. Robertson and Mrs. Daniel Longaker as hostesses.

Washington.—The annual banquet was held in the ballroom of the George Washington Hotel on the evening of January 9th. The program planned by Mesdames LaRoss, McCullough, Knox, and Carey consisted of amusing and varied ways in which all the guests might become better acquainted. One of these methods was to have the guests change tables between courses, thus forming new groups for the enjoyment of the delicious dinner. Mrs. A. W. Happer, president of the auxiliary, welcomed the guests in a cordial manner, to which Dr. J. H. Repman, president of the medical society, gave a fitting response. Miss Hilda Cook and Miss Lois Wylie, of McDonald, gave vocal numbers which were enthusiastically received. Dr. Melrose E. Weed, of the Washington Hospital, added much to the jollity of the occasion by his spirited piano numbers.

Mrs. Clarence McCullough, Miss Marjorie Patterson, Dr. J. F. Donehoo, and Dr. H. M. Friedland gave a pantomimic interpretation of the comedy, "When the Lamp Goes Out," read by Mrs. F. I. Patterson. Mrs. J. H. Corwin added much to the success of this play in her capacity as stage manager. Mr. Frank Judson enlivened the program by giving several stories and impersonations. An unusual feature was a group of costume dances given by Misses Carrie Herschell and Freda Lindley, accompanied by Mrs. Margaret Burig. Mrs. L. J. Conover, one of Washington's best known musicians, was the accompanist for the other musical numbers. Mrs. John C. Knox conducted the group singing of the old melodies, familiar to every one.

Westmoreland.—The monthly meeting was held at the Elks Club at Greensburg, February 4th. Twenty-eight members and guests were present.

Mrs. Walter J. Freeman, honor guest, gave an instructive talk on auxiliary work. She stressed the necessity for periodic health examinations, and expressed the request for a good report of the same for our meeting in Johnstown in October. Mrs. Freeman requested that we write a history of our auxiliary.

The hospitality committee arranged a delicious dinner with table decorations of spring flowers and bright colored wax tapers. The program committee presented a splendid program with Mrs. Charles Walker, soprano; Miss Martha Brechbill, pianist; and Miss Jean Temple, reader.

Medical News

Deaths

MRS. MURPHY, wife of Dr. Arthur Irwin Murphy, of Pittsburgh; February 7.

JACOB W. KLINE, M.D., of Easton; Medico-Chirurgical College, 1892; aged 62; February 8.

MRS. MARGARET TURNER CLARK, sister of Dr. John H. Turner, 3d, of Glenolden; February 10.

MRS. MARY PANCOAST PACKER, wife of Dr. Jesse E. Packer, of Newtown; aged 38; January 24.

MRS. BLAIR, wife of Dr. H. A. Blair, of Curwensville, died the early part of December.

JOHN V. ALLEN, M.D., of Philadelphia; Hahnemann Medical College, 1881; aged 70; February 6.

IRA KLINE DAVIS, M.D., of Braddock; Jefferson Medical College, 1925; aged 32; November 17, of pneumonia.

William J. Felsburg, Jr., M.D., of Philadelphia; Hahnemann Medical College and Hospital, 1913; aged 39; February 10.

William D. W. Hall, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1889; aged 64; February 2.

John O. Wagner, M.D., of Beaver Springs; College of Physicians and Surgeons, Baltimore, 1880; aged 75; February 3.

Mrs. M. Preston Straight, of Bradford, widow of Dr. A. M. Straight and mother of Dr. Persis Straight Robbins, died January 24.

John F. X. Cannon, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1920; aged 32; February 13, of pneumonia.

Adam P. Fogleman, M.D., of Sheridan; University of Pennsylvania School of Medicine, 1884; aged 70; January 11, of cerebral hemorrhage.

Ralph Eaton Miller, M.D., of Bloomsburg; University of Pennsylvania School of Medicine, 1904; aged 54; December 11, of angina pectoris and coronary embolism.

George O. O. Santee, M.D., of Cressona; Jefferson Medical College, 1897; aged 55; February 1, from injuries suffered in an automobile accident ten days previous.

Caroline L. Mitchell, M.D., of Norristown; Keokuk Medical College, 1906; on the staff of the Norristown State Hospital; aged 50; died recently of injuries received in an automobile accident.

John Dillon Spelman, M.D., of Pittsburgh; University of Cincinnati College of Medicine, 1911; aged 40; December 17, of pulmonary embolus, following an operation for drainage of an appendical abscess.

Charles S. Potts, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1885; aged 65; February 16. Dr. Potts was an internationally known neurologist. In 1890 he was appointed instructor in electrotherapeutics and nervous diseases at the University of Pennsylvania, and later became associate in neurology. Professor of neurology in the Graduate School of the University of Pennsylvania. He was also made professor of neurology at the Medico-Chirurgical College until that institution was absorbed by the University. Dr. Potts was the author of several books on neurology and was consulting neurologist to the Atlantic County (N. J.) Hospital for the Insane.

Birth

To Dr. and Mrs. David Stein, of Philadelphia, a son, Kenneth Langman, recently.

Engagements

Miss Dora Kopp and Dr. Henry B. Mussina, both of Williamsport.

Miss Sedric Williams, of Cambridge, Mass., and Dr. Fielding O. Lewis, of Philadelphia.

Marriages

Mrs. Janice L. Simpson, of New York, to Dr. Louis L. Hobbs, of Ridgway, in December.

Miss Cornelia Elizabeth Isenhower, of Walnut Grove, Alabama, to Dr. Edward Lyon Keyte, of Philadelphia, January 17.

Miss Ethel B. Markley, daughter of Dr. and Mrs. J. M. Markley, of Schwenkville, to Dr. Albert G. Gibbs, of Nanticoke, November 16.

Miss N. Hyacinth Beard, assistant at the Harrisburg headquarters of the State Society, to Mr. John A. Willners, both of Harrisburg, February 1.

Miscellaneous

Dr. Arthur D. Cowdrick, of Clearfield, has now assumed his duties as county treasurer.

Dr. L. M. Hoffman, of Williamsport, is pursuing postgraduate work in surgery at the University of Pennsylvania.

Drs. J. Hayes Woolridge and J. M. Quigley, of Clearfield, are improving after being hospitalized for several days.

Dr. Francis X. Dercum, well-known neurologist of Philadelphia, who has been critically ill of bronchial pneumonia is reported improved.

Dr. G. A. Rickets, of Osceola, who was recently confined to his home with influenza has recovered sufficiently to look after his work.

The fourth annual exhibition of the New York Physicians' Art Club was held the latter part of February at the New York Academy of Medicine.

A recently organized medical society, the Bronx Medical Alliance, holds monthly meetings at Hunts Point Hospital and issues a monthly bulletin entitled *Facts*.

Drs. R. Tait McKenzie and Andrew F. Snively, of Philadelphia, and their wives have recently enjoyed a Mediterranean cruise.

Dr. and Mrs. Frank C. Parker, of Norristown, have returned home after taking a sixteen-day boat trip to Nassau, Jamaica, Cuba, and Panama.

The annual smoker of the Medical Alumni Association of Temple University Medical School was held at the Bellevue-Stratford, Philadelphia, February 1.

Dr. M. F. Kocevar has resumed his practice in Steelton after spending more than seven months of postgraduate study in medicine and surgery in this country and Europe.

At the meeting of the Physicians' Square Club, Philadelphia, held February 25th, Dr. Edward Ludholtz was the guest speaker and spoke on "A Journey to Christian Science and Beyond."

Governor Fisher on January 31st, removed Joseph Voshefski, of Glen Lyon, as a member of the board of trustees of the Nanticoke State Hospital. Dr. E. J. Kielar, of Glen Lyon, was named as his successor.

Dr. Theodore B. Appel, secretary of health of Pennsylvania, delivered the address at the 109th anniversary of Founder's Day of the Philadelphia College of Pharmacy and Science, February 24.

Director Hines of the Veterans' Bureau has announced that the contract for the Veterans' Bureau Hospital at Lexington, Ky., has been awarded to the National Construction Company of Atlanta, Ga., for $806,103.

A bronze tablet to the memory of Dr. Kay I. Sanes was unveiled at the annual meeting of the Montefiore Hospital Association, Pittsburgh, January 13th. Dr. Max H. Weinberg spoke in behalf of the medical staff.

Dr. Joseph S. Neff has been reported improved after a serious illness at his home in Narberth. Dr. Neff was at one time director of the Department of Public Health and Charities of the city of Philadelphia.

At a meeting of the board of trustees, held February 14th, the name of the Samaritan Hospital, Philadelphia, the teaching hospital of the medical school of Temple University, was changed to Temple University Hospital.

It is reported that Dr. Isidore Cohn, a surgeon of New Orleans, has removed a bony tumor, two-and-a-half inches by one inch, from the eye socket, without

injuring the eye. The patient has recovered full use of the eye.

The following doctors were elected fellows of the American College of Physicians: Isabel M. Balph, Frank W. Burge, David N. Kremer, Mary McI. Spears, and John Eiman, all of Philadelphia; and William Devitt, of Allenwood.

The annual lecture of the Philadelphia Urological Society of the American Urological Association was delivered in the College of Physicians, January 27, by Dr. John H. Cunningham, Boston, Mass., on "Bladder Tumors (Impressions and Facts)."

City Council's Public Health Committee recently conducted a tour of sites available in Philadelphia for the construction of a municipal hospital for tuberculous patients. An item of $1,000,000 was authorized for this purpose in the recent loan bill.

The Annual Congress on Medical Education, Medical Licensure, and Hospitals was held February 17th, 18th and 19th, at the Palmer House, State and Monroe Streets, Chicago, Ill. Many of the most noted physicians addressed some of the meetings.

The Frankford Hospital, which has just closed a $350,000 building-fund campaign, is one of the three most crowded hospitals in Philadelphia, with a bed occupancy of more than eighty-two per cent, leaving scant margin for emergency. The other two hospitals have recently built additions.

An unnamed philanthropist has offered to subscribe $100,000 to start a building fund for a nurses' home at the Delaware County Hospital, Upper Darby, if residents of that community will raise $65,000. A citizens' mass meeting was called to enlist support of the project.

At the Founder's Day exercises of Temple University, Philadelphia, held February 14th, the honorary degree of L.L.D. was conferred upon Dr. Chevalier Jackson, professor of bronchoscopy, Temple University School of Medicine.

A special five-weeks' course, beginning July 21st, in otorhinolaryngology will be held by Professor Georges Portmann at the University of Bordeaux, France. The class will be limited to twelve students; tuition fee, $350. Further information can be obtained from Leon Felderman, M.D., Broad and Locust Streets, Philadelphia, Pa.

The booklet on *Infant Care* has been rewritten and brought up to date by the Department of Labor. More than 430,000 copies of the old edition were distributed during 1929. The new edition is the last and most authoritative word on the subject. Single copies are sent out free on application to the Children's Bureau of the Department of Labor.

Dr. Benjamin C. Gile, of Philadelphia, examining physician for the Aeronautics Branch of the U. S. Department of Commerce in the district, addressed the members of the Burlington County Aero Club in the Community House of Moorestown, N. J., February 17. Dr. Gile served during the World War as an instructor of flight surgeons and originated many of the tests given prospective pilots.

The staff of St. Joseph's Hospital of Reading entertained the medical profession of Berks County with an exhibition of motion pictures showing the behavior of normal and malignant tumor cells subjected to beta and gamma rays of radium, in the Medical Hall, on February 28th. The films were obtained for the occasion through the courtesy of the American Society for the Control of Cancer, New York City.

A thirty-story professional building, costing $2,500,000, to be occupied and owned largely by physicians and architects, will be erected at the southeast corner of 17th and Latimer Sts., below Locust, Philadelphia. The new professional building will be known as "Medical Towers," and will be built on the setback plan. It will be built, operated, and owned on the tenant-owned coöperative plan.

A series of medical talks on "Outwitting Your Nerves and Old Age" will be given before the New Century Guild, Philadelphia, beginning on February 19th, it was announced by Dr. Alice M. Norton, chairman of the social activities committee of the group. Among the speakers will be Dr. Margaret A. Warlow, formerly of the Woman's Medical College, and Dr. Kate W. Baldwin, of Philadelphia.

Dr. Edward A. Strecker, professor of nervous and mental diseases at Jefferson Medical College, Philadelphia, has completed an advanced course of ten lectures on the general subject of "Psychiatric Aspects of Youth and Maternity," in New York City, under the auspices of the New York City Committee on Mental Hygiene of the State Charities Aid Association and the Coöperative Committee of the Big Sisters.

Plans were completed February 1st for a Philadelphia Association of Tuberculosis Clinics. Formal organization took place February 19th, when by-laws were adopted and directors elected. Dr. A. J. Cohen, chief of the City Division of Tuberculosis, will be active president. The Association will coördinate and seek to raise the standards of twenty-three chest clinics now being conducted in the city.

It was announced February 16th that George Eastman, head of the Eastman Kodak Company of Rochester, N. Y., was the recipient of the medal of the American Institute of Chemists for noteworthy and outstanding service to the science of chemistry and the profession of chemistry in America. Dr. Frederick E. Breitnut, president of the Institute, in announcing the award, characterized Eastman as "one of the greatest lay-scientists of the present day."

Murderers in San Quentin Prison, Calif., all have abnormal thyroid glands, Dr. Ralph Arthur Reynolds has announced after two months of study there. Every murderer, potential and actual, exhibits oversecretion of the thyroid gland; every forger exhibits undersecretion of the pituitary gland; every social misfit displays malsecretion of some gland. Dr. Reynolds said surprising results were obtained in sixty cases he personally treated. He is convinced that crime and abnormal glands go hand in hand.

The body of Dr. William J. Deegan, Camden veterinarian, who died February 3rd in Cooper Hospital, was disinterred February 11th, so that his brain might be tested for evidence of rabies, which may have caused his death. The death certificate recorded spinal tumor as the cause of death, but it was thought by his widow that a bite received from a dog last November might have caused rabies. The brain was sent to the State Department of Health in Trenton, where tests will be made to establish the cause of death.

The first industrial motion-picture theater in the world will be established and operated as a feature of the American Fair, to be held in the Atlantic City auditorium, July 17th to August 27th. This auditorium, the largest in the world, is not an institution for private profit and there will be no admission charge. Films demonstrating methods of labor saving in the home, first-aid, public health, industrial housing, etc., will be shown, and it is estimated that at least 1,500,000 persons will visit the Fair.

The second issue of *The Hebrew Physician* (Harofeh Hoibri), the only Hebrew medical journal published outside of Palestine, has recently appeared. This journal is under the editorship of Drs. Moses Einhorn and L. M. Herbert, at 983 Park Avenue, New York City. It consists of 180 pages, and contains articles on general medical subjects, including a copy of the manuscript on "Hemorrhoids," by Shlomo Eben Ayub, of

Badrash, France (1265 A. D.). A special section is devoted to new Hebraic medical terminology.

Eldridge R. Johnson, a trustee of the University of Pennsylvania, and former president of the Victor Talking Machine Company, has given $250,000 to the University of Pennsylvania for the further endowment of the Eldridge R. Johnson Foundation for Research in Medical Physics. In the past ten years Mr. Johnson has given the University nearly $2,000,000. In 1927, when he established the foundation which bears his name, he contributed $200,000 for building and $600,000 for endowment. His latest gift raises the total endowment of the foundation to $850,000.

Jefferson Medical College will proceed with plans to add the study of eugenics to its curriculum, following a Pennsylvania Supreme Court ruling upholding the award of a $70,000 trust fund to the college for that purpose. The late Dr. J. Ewing Mears, Philadelphia surgeon and writer on medical topics, created the fund in his will, intending it should go to Harvard University, which declined to accept. The court designated Jefferson Medical College as trustee of the bequest, despite claims of Dr. Mears' relatives that the legacy had failed and should revert to them.

As the result of the recent merger of the Woman's Hospital of Philadelphia, located since 1861 on North College Avenue, and the West Philadelphia Hospital for Women, located at 41st and Parrish Streets, a single new structure will soon house the joined activities of the two hospitals. Formal reception of the charter of the new institution, which resulted from the merger and is to be known as the new Woman's Hospital of Philadelphia, took place February 18th. Plans were formulated for a $1,000,000 fund to finance the erection of the new building on the present West Philadelphia location.

A robber held up the cashier's office in Providence Hospital, Detroit, February 15th, shortly after 7 a. m., and escaped with a payroll of $5,000. A number of nurses, other hospital employees, and several carpenters and painters who had been doing repair work in the hospital were lined up before the cashier's cage receiving wages. The robber, who was dressed in workman's clothing, was in the line-up when he reached the cage. He seized a box containing pay envelopes and after a struggle with Sister Rosario, the cashier, ran from the building. The bandit did not draw a gun, although one of the sisters said she saw a weapon in his pocket.

Taking the position that the injury of one of their post members while an inmate of the Gray's Ferry Hospital, Philadelphia, for disabled veterans, was due to overcrowded conditions in the institution, members of Bernhard F. Schlegel Post of the American Legion, West Chester, named a committee to enlist the aid of Congress towards relief. James S. Vanranken, a West Chester veteran, who was severely injured in an alleged beating administered by attendants of the Gray's Ferry Hospital, is a member of the local post. The following doctors have been named as members of the committee: Charles Kerwin, John A. Farrell, and Henry Pleasants.

In March, the official bulletin of the Bucks County Medical Society will celebrate its twentieth anniversary. We beg to extend congratulations! During this time Dr. John B. Carrell, of Hatboro, has been its efficient editor, and with the coöperation of Dr. Anthony F. Myers, of Blooming Glen, the assistant editor and the intrepid secretary of the county society, the bulletin has been fearless in its fight for the best interest of the medical profession in their county and for organized medicine. Of the committee of five appointed to originate the publication, four are living to share in its achievements.

Mead Johnson and Company's infant diet materials are advertised only to physicians. No feeding directions accompany trade packages, but information in regard to feeding is supplied to the mother by written instructions from her doctor who changes the feedings from time to time to meet the nutritional requirements of the growing infant. Literature is furnished only to physicians. Every physician should bear in mind that here is one firm, instead of exploiting the medical profession, lends its powerful influence to promote the best interests of the medical profession it so ably serves.

Ceanothyn is being exclusively used in some maternities for the control of uterine bleeding, and is being used by many physicians in the treatment of bleeding from the nonpregnant uterus. In consideration of the unestablished and, therefore, unwarranted therapeutic claims for ceanothyn, and in further consideration of the inconclusive character of the available evidence for the drug's value as a coagulant, the Council on Pharmacy and Chemistry of the American Medical Association confirmed its decision holding the product unacceptable for *New and Nonofficial Remedies*.

The tuberculosis annex of the Philadelphia General Hospital, with provision for 125 beds, is now nearing completion on the grounds of the Philadelphia Hospital for Contagious Diseases, at Front and Luzerne Streets. The structure is a remodeling of the former smallpox building of the Hospital for Contagious Diseases. It will be ready to receive patients not later than March 15th. The need for an annex to take care of city patients suffering from tuberculosis was recognized more than a year ago, and the taking over of the Front and Luzerne Streets buildings and their subsequent alterations followed, at a renovation cost of $40,000.

The United States Civil Service Commission announces the following open competitive examinations: medical officer, associate medical officer, assistant medical officer, chief nurse (Indian service), head nurse (Indian service), graduate nurse (various service), graduate nurse—visiting duty (various service), and graduate nurse—junior grade (various service). The examinations are to fill vacancies in hospitals of the Veterans' Bureau, the Public Health Service, the Indian Service throughout the country, and at the Federal Industrial Institution for Women, Alderson, W. Va. Applications must be on file with the Civil Service Commission at Washington, D. C., not later than June 30.

The ninth annual convention of the International Society for Crippled Children will be held at Toronto, March 17th. Hon. G. Howard Ferguson, premier of Canada, and Hon. Franklin D. Roosevelt, governor of New York, are included in a long list of distinguished speakers who have accepted program assignments. The convention will be devoted to the discussion of specific problems encountered in restoring crippled children to health and happiness. Education, vocational rehabilitation, treatment and care, investigation into the causes of crippling, questions of financial and professional aid, and management of this world-wide movement will be brought before the delegates.

It is of interest to note amounts awarded by the courts for personal damages. A New York City court recently awarded a five-year-old child $22,500 for the loss of her right leg, which had been crushed by a street-cleaning truck. The settlement provides that $20,000 be set aside for the child's use, while $2500 be used by her mother for the purchase of an artificial leg. One naturally assumes that the lawyer's fee will cut in half what the child received. Yet, for the loss of a life a paltry few thousand dollars prevail, irrespective of the number of dependents. On February 15th, the Workmen's Compensation Board of Pennsylvania in a decision handed down in the case of an assistant county superintendent of schools who was killed in the course of his employment, made a compensation award of $2,075.35 to the guardian of his three minor children.

A PHILADELPHIAN STATES that there seems to be some misunderstanding relative to the application of the medical laws to pupils attending the public schools in Philadelphia, as there came to his door a nurse from the school where one of his children was in attendance. She claimed the child's teeth needed attention. He informed her that the same would get the service of his doctor. He did not invite her into the house, as it would really cause a misunderstanding had something in the way of sickness come along afterward. This child was called up before the class in session and given to understand that her parent did wrong by not bringing the nurse into the house. Let us hope that the way of discipline does not belie the teaching lesson of him who turns the other cheek.

MEDICAL QUACKS who attempt to capitalize the fact that a man is suffering from a disease, prolong the treatment, and squeeze out every possible cent they can under pretense of a high cost of cure were scathingly denounced by Dr. Jay F. Schamberg, in a postgraduate lecture given under the auspices of the Philadelphia County Medical Society.

"It is the highest degree of unethicality in the medical profession to exploit a man's misfortune," Dr. Schamberg declared, "yet there are such men among physicians, and they continue to exist and to prosper." It should be the purpose of every reputable physician to cleanse the profession of such malpracticing men as these, and to themselves strive for complete frankness and understanding between patient and physician.

ORGANIZATION OF THE OLD YORK ROAD MILK CONTROL BOARD was completed at a meeting of officials of suburban townships and districts, held at Abington. Purposes of the new organization will include the official control, supervision, and inspection of all sources of milk supplies sold to consumers in the district which now includes Cheltenham, Abington, and Springfield townships, and the borough of Jenkintown. Enlargement of this area will follow, if other suburban municipalities desire to become affiliated. Inspections will be made of all dairies, or milk-supply sources, by approved veterinarians, and analyses of milk samples from all sources will immediately follow. Protection of the consumer and the establishment of highest standards or products offered for sale are primary purposes of the Board.

THE WILLS EYE HOSPITAL, Philadelphia, will receive $100,000 outright from the $1,800,000 estate of the late Edward T. Dobbins, and twenty-five other charitable institutions will receive the income from the amounts designated to each in the will, it was decided February 6th, by Judge Allen M. Stearne in the Orphans' Court. The court upheld the contention of the Board of City Trusts, which administers the Wills Eye Hospital, that the gift was absolute, thereby making the amount payable in one sum. Upon his death, February 17, 1906, Mr. Dobbins' will was found to state that his estate be in trust and that his sister, Mary A. Dobbins, should have power of appointment at her death. She died January 27, 1929, and, in carrying out the wishes of her brother, named the institutions which were to share in the estate.

ACTION TAKEN IN JANUARY by the Philadelphia Board of Health will prohibit in Philadelphia the sale of any milk not produced by tuberculin-tested cows. The action of the board places this city among the leaders in the municipal jurisdiction over the sale of milk. Approximately eighty-five per cent of the milk supply of the city already is being produced by cows tested for tuberculosis. The new regulation will become effective on May 1 of this year, and it stipulates that the tests must be made in accordance with the standards of the Bureau of Animal Industry of the United States Department of Agriculture. The ruling has met with the approval of the Interstate Milk Producers' Association, the majority of whose members shipping to this city have voluntarily been producing tuberculin-tested milk for a considerable period.

DR. JOHN RATHBONE OLIVER, internationally famous psychiatrist and clergyman, as well as winner of the Pulitzer prize for literature by his book, *Victim and Victor,* was the guest of the Philadelphia churches and clergy on February 9th and 10th. Dr. Oliver is a member of the faculty of the University of Maryland and of Johns Hopkins University, and is also chief medical officer of the supreme bench at Baltimore. He has been intimately associated with the criminal and social delinquent for more than twenty-five years. Dr. Oliver's long service with the Baltimore courts as chief medical officer has given him the opportunity for close study and critical observation of the social outcast and his problem. He has been credited with having helped redirect hundreds into paths of usefulness. In addition to his work in the criminal courts, he is professor of the history of medicine at the University of Maryland.

THE NEW COLLEGE BUILDING of the Jefferson Medical College of Philadelphia was dedicated February 22d. The dedicatory address was delivered by George B. McClellan, professor of economic history, Princeton University, who is a grandson of the founder of the college. Special alumni clinics were conducted during the afternoon. Public inspection of the departments of the college were made during the morning and afternoon. The annual business meeting of the alumni association was held in the auditorium of the new college building during the afternoon, at which time the presentation of a portrait of Mr. Alba B. Johnson, president of the board of trustees, was made by Dr. Willard H. Kinney. Also the presentation of a portrait of Dr. Ross V. Patterson, dean of the college, by Dr. Elmer L. Myers, of Wilkes-Barre, president of the Alumni Association. The midwinter smoker and entertainment were held in the evening.

FACILITIES FOR HEALTH EDUCATION in a majority of the schools in Pennsylvania are inadequate, W. G. Moorhead, director of health and physical education of the Department of Public Instruction at Harrisburg, declared before the thirty-fifth convention of the Pennsylvania State School Directors' Association, February 5th, with more than 1,000 delegates in attendance. Instructors are handicapped, he added, because of the lack of properly ventilated gymnasiums. "The State program for health and physical education in the public schools does not concern itself with what the child knows of physiology and its underlying principles, but it aims to provide those things which give the child the opportunity of living right," he said. We pay too much attention to the athletic progress of the individual, ignoring the many, who really need it. One basketball game a week is sufficient and all additional games tend only to draw away the attention of the players and their followers from the other important places of school education.

A MAN 72 YEARS OF AGE, residing in Queens County, N. Y., died of rabies at the Nassau County Hospital on November 12th. He was bitten on the hand by a rabid stray dog in New York City on September 3d. The wounds were cauterized by a druggist with carbolic acid and he received a course of fourteen injections of the Semple treatment, beginning on September 5th. He showed no signs of illness until November 1st, fifty-nine days after he was bitten. This case serves to emphasize the need of the prompt use of fuming (or concentrated) nitric acid in the cauterization of wounds by animals that may have rabies. Evidence has accumulated to indicate that this treatment of itself is fairly efficient in preventing rabies, but that carbolic acid and other chemicals used for cautery are of little use. If the Pasteur (or Semple) treatment is given in addition it is probable that rabies rarely will develop. —*Health News.*

Should a druggist have given first aid, so to speak, in this instance? Would it not have been better for the druggist to have referred the man to a physician or hospital?—*Editor.*

(Concluded on page xviii.)

Small-Pox Vaccine

All physicians are interested in securing successful "takes" with a minimum of local and systemic reactions. To accomplish this, vaccination should be practiced during cool weather.

The Reasons Are Self-Evident

1. The potency of vaccine is better when propagated during cool weather.
2. Vaccine stands shipment better during cool weather—Remember —Heat Kills Vaccine!
3. Higher percentage of takes, which means greater protection against small-pox.
4. Less sore arms and legs; children particularly do not expose the vaccination wound to infection to the same extent during the winter as during the summer months.
5. Physicians should be impressed with the importance of vaccinating during infancy and above all to vaccinate the pre-school child during cool weather.

Most vaccinating is performed during August, or the first week of September, before the child enters his first term at school. This is the exact period of the year when both heat and humidity are the very highest and in consequence the potency of the vaccine is the lowest.

While exercising every care we cannot control temperature. Remember the slogan "Heat Kills Vaccine"; therefore, vaccinate during cool weather.

National Small-Pox Vaccine can be depended upon to give maximum protection with minimum reactions if proper technic is practiced. We suggest Leake's multiple dermal puncture method of vaccinating as endorsed by the U. S. Hygienic Laboratory. **Avoid Use of Shields!**

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MEDICAL NEWS

(Concluded from page 428.)

IN DECEMBER, 1929, the medical schools of Pennsylvania received the following letter from the president of the Pennsylvania State Board of Medical Education and Licensure:

"The Board, at a recent meeting, passed the following resolution, and we shall be pleased to have you post it on the bulletin board of your school: 'In view of the fact that quite a number of prospective candidates for licensure in Pennsylvania who have graduated from the Pennsylvania medical colleges have been taking their internships outside of the State, and not directly under the jurisdiction of the Board of Medical Education and Licensure, it is moved and seconded that a letter be sent to the deans for posting on the bulletin board of each medical school in Pennsylvania, stating that any student who contemplates internship outside of the State and licensure in the State later be urged to consult the Board or a member thereof relative to such internship.' The purpose of this is to avoid complications which are apt to arise at the close of the intern year."

DIRECTORSHIP OF THE GEORGE S. COX MEDICAL RESEARCH BUREAU, Philadelphia, established to seek a cure for diabetes, has passed from Dr. Levi Jay Hammond, who died January 6, to his nephew, William Linwood Hammond, an Assistant U. S. District Attorney. This became known when Dr. Hammond's will and accompanying codicil, in which he named his successor, were probated in the Register of Wills' office. The codicil was dated March 24, 1926, the day after the will of George S. Cox, stove manufacturer, had been probated. Mr. Cox stipulated that his residuary estate, now listed at $640,982.46, be used for the research bureau. The purpose of the bureau, according to Mr. Cox's will, which is quoted in the document left by Dr. Hammond, is "first, to discover a cure for diabetes, and also to work in any other avenue of medical research that the medical director may in his judgment think best." Mr. Cox appointed Dr. Hammond as director with the power to appoint his successor. William Linwood Hammond is likewise given power in Dr. Hammond's will to name or appoint, either personally or by will, a succeeding director. In a note written in his own hand at the end of the codicil, Dr. Hammond said: "William Linwood Hammond has been thoroughly informed of the necessary requirements of this position and understands how best to meet them."

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PREMATURE INFANTS*

A Report of Seven Hundred and Sixty-one Consecutive Cases†

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AND
EVELYN C. LUNDEEN, R.N.
CHICAGO, ILL.

In the period from 1922 to December 31, 1929, seven hundred and sixty-one infants were admitted to the Premature Infant Station at the Sarah Morris Hospital. Only those thought to have been born prematurely are included in this report.

Among these infants there were thirty-eight who weighed over 2500 grams when admitted; all, however, showed distinct stigmata of prematurity. We also admitted some very small infants, in most instances the product of multiple gestation, who were born at or near term, but were decidedly immature. The term, immature infants, might well be used to apply to both of these groups of infants, because of similar indications presented for their feeding and care.

ETIOLOGIC FACTORS INFLUENCING TERMINATION OF PREGNANCY

The occurrence of premature birth depends on many causes, which may be divided into those resulting in the expulsion of a healthy premature infant and those which have a damaging effect on the product of conception. In the first class may be included various injuries, falls, heavy lifting, overwork, and physical exhaustion from other causes, also sudden emotional disturbances. Premature rupture of the membranes, either accidental or intentional, occurring in conditions which do not affect the nutrition of the ovum, as in pelvic and spinal deformity in the mother, and placenta previa, are other causes which result in expulsion of the fetus.

The conditions within the second category react to a greater or lesser degree on the fetus, some producing only momentary weakness, as the milder acute infections, and others causing a weakened physical condition as a result of their interference with the nutrition and development of the fetus.

Although careful histories were invariably taken, we were able to find a definite cause for the premature termination of gestation in only 307 of the 761 cases. (See Table 1.)

There were six instances of placenta previa; ten cases of induced labor for pelvic deformity and other conditions; and six cases in which labor was precipitated by automobile accidents. There were twenty-seven cases caused by syphilis of one or both parents, as proved by routine Wassermann and Kahn tests; seven cases in which the mother had open tuberculosis; thirty-nine cases of toxemia of pregnancy; nine of acute nephritis; ten of advanced heart disease; one of diabetes; and seven cases of abdominal operations with resulting premature labor.

One hundred and ninety-two infants were admitted as a consequence of multiple conception. This was the most common single cause of premature labor. (See Table 2.) Many of these showed evidence of impaired vitality. They represented a total of 248 infants—110 being twins, and 2 sets of triplets. Fifty-six of the infants died in the homes or other institutions. Of the 192 infants who were received at the station, 133 were graduated, and 59 died during their stay at the Sarah Morris Hospital. Of these 192, there were 100 males and 92 females; 29 males and 30 females died. Of those graduating from the station there were 19 pairs of boys and 11 pairs of girls, 2 of one set of triplets —the remaining 71 were either pairs of opposite sex or single.

There were two infants in the series of multiple pregnancies who weighed under 1000 grams. Of these, one lived and one died. At present the one who lived is ten months of age, weighs 6500 grams and is doing well. This infant had a birth weight of 940 grams and on the fourth day weighed 850 grams; and at 72 days, 1720 grams.

*Read before the Section on Pediatrics of the Medical Society of the State of Pennsylvania, Erie Session, October 2, 1929.

†From the Premature Infant Station, Sarah Morris Hospital for Children, Michael Reese Hospital, and Nelson Morris Research Institute, Chicago, Ill. This Station is endowed by the Infants' Aid Society, Chicago, Ill.

In the group of 43 who weighed between 1000 and 1500 grams, 19 lived and 24 died; of 74, between 1500 and 2000 grams, 59 lived and 15 died; of 39, between 2000 and 2500 grams, 35 lived and 4 died; of 13, between 2500 and 3000 grams, 12 lived and 1 died; of 12 of unknown weight at birth, 7 lived and 5 died.

in homes. The mortality of the hospital births was 23.9 per cent, and that of the homes 45.3 per cent.

We wish to emphasize that of the total this station received only twenty-nine per cent of its cases from its own institution. In Chicago, few institutions will accept into their nursery

Infants Graduated Who Had a Birth Weight Under 1000 Grams

Name	Admission		Birth weight, grams	Lowest weight, grams	Birth weight regained, days	Discharge		Development	
	Age, days	Weight, grams				Age, days	Weight, grams	Age, months	Weight, grams
SI	20	745	900	745	14	116	2500	12	6500
NW*	15	840	....	840	41	89	1910	16	7335
Rubin	1	940	940	850	21	72	1720	10	6500
Hawes	1	890	890	850	7	68	1940	..	....

* Birth weight believed to be over 1000 grams.

Place of Birth

The higher mortality of the group of infants born at home indicates the importance of early care and especially of maintenance of a nearly normal body temperature. Chilling before and during transportation was undoubtedly a factor of importance. (See Table 5.)

wards infants born on the outside, and unfortunately only a few hospitals have their children's wards equipped to meet the needs of prematurely born infants.

This differs from the previous report[1] on prematures, since there were more infants born in hospitals than at home. This is probably due to

Table 1

Etiologic Factors Influencing Termination of Pregnancy

Etiology—Diseases of mother	Birth weight in grams					Weight unknown	Total	Died
	Less than 1000	From 1000 to 1500	From 1500 to 2000	From 2000 to 2500	From 2500 to 3000			
Syphilis	1	3	16	3	..	2	27	16
Tuberculosis	1	2	2	1	1	..	7	5
Toxemia of pregnancy	3	9	10	14	2	1	39	6
Nephritis	1	..	5	2	..	1	9	3
Heart disease	..	2	5	2	..	1	10	2
Diabetes	..	1	..	..	..	..	1	1
Acute infections necessitating operation	..	2	2	1	2	..	7	2
Placenta previa	..	2	3	1	..	..	6	2
Induced labor and other causes (forceps and cesarean)	..	2	3	4	1	..	10	5
Multiple pregnancy	11	43	74	39	13	12	192	59
Accidental trauma (auto accidents)	..	..	2	4	..	..	6	1
Pneumonia	..	1	2	..	..	1	4	1
Asthma	1	..	..	..	..	1	2	..
Epilepsy	..	..	..	1	..	..	1	1
Pernicious anemia	..	..	1	..	..	..	1	..
Pyelitis	..	..	..	1	..	..	1	1
Toxic thyroid	1	1	..	1	..	..	3	..
Encephalitis	..	..	1	..	..	..	1	..
Acute yellow atrophy	..	..	1	..	..	..	1	..
Shock	..	..	..	1	..	..	1	..

Of the first group (266 infants, from 1922 and 1926), 73 were born in Michael Reese Hospital; 53, in other hospitals; and 140, in homes. The mortality of the hospital births was 42 per cent, and that of the homes 53.5 per cent.

Of a second group (399 infants, during 1927 to July 1, 1929), 119 were born in Michael Reese Hospital; 99, in other hospitals; and 181,

several causes: first, the percentage of infants born in hospitals is increasing yearly; and, second, education of physicians and hospitals to the advantages offered by a special premature station. Approximately seventy-five per cent of infants are cared for without charge.

Because of the high mortality among infants having a markedly subnormal temperature when

brought to the station, the hospital attempts, whenever possible, to send a member of its staff for the infant.

To facilitate transportation of these infants with a minimum exposure, one of us has designed a small hand ambulance,[2] about twice the size of an obstetrical bag, equipped with a special electric heating unit which may be attached to a 110-volt household current, to the 32-volt lighting system of a Pullman car, or to the 6-volt lighting system of an automobile.

Table 2

Infants Born of Multiple Pregnancy

	Under 1000 grams	From 1000 to 1500 grams	From 1500 to 2000 grams	From 2000 to 2500 grams	From 2500 to 3000 grams	Birth weight unknown	Total	Males	Females
Admitted	11	43	74	39	13	12	192	100	92
Lived	1	19	59	35	12	7	133	77	56
Died	10	24	15	4	1	5	59	23	36

Outstanding Clinical Pathology

Of the second group of 399 infants, each pathologic entity is listed according to the number of infants in which it was recorded. Many infants had several of the conditions listed. (See Tables 9, 10, and 11.)

Cyanosis was the most frequent pathologic finding noted in the station. It was present in 138 infants, of whom, 85 died. The cyanosis varied in degree from the extreme purple of infants with marked atelectasis to the slight degree of blueness noted occasionally during or after feeding.

Clein[3] made a special study of the appearance and course of cyanosis in 102 of our group of infants. Marked cyanosis was observed in 53 (51 per cent) of these cases, 46 of the infants died; only 2 of the infants who died did not exhibit cyanosis at some time during the course of the illness. In the infants who lived, cyanosis occurred as a single attack or as an occasional attack associated with some demonstrable cause such as hypothermia, hyperthermia, vomiting during feeding, or the presence of abdominal distention, diarrhea, and infection. Temporary attacks of a minor degree are not an uncommon sign in the premature infant who survives.

Cyanosis was the most outstanding symptom in the patients who succumbed. It became evident that most cases in which cyanosis occurred could be more or less definitely grouped, with regard to type, time, and frequency of occurrence as a basis. This led us to attempt to establish a classification of this symptom based on a correlation of the clinical observations and pathologic findings.

(1) *Continuous.*—This type of cyanosis was continuous and progressive from the time of

Table 3

Admission by Years*

Year	Under 1000	From 1000 to 1500	From 1500 to 2000	From 2000 to 2500	From 2500 to 3000	Over 3000	Not known	Total admissions	Lived	Died	Lived
1922—Lived	0	5	4	1	0	0	1	19	11	8	57.9%
Died	2	2	1	0	0	0	3				
1923—Lived	0	2	8	1	1	0	0	28	12	16	42.9%
Died	5	6	4	1	0	0	0				
1924—Lived	0	0	10	5	1	0	0	47	16	31	34.0%
Died	5	9	9	5	0	0	3				
1925—Lived	0	7	13	12	3	0	8	66	43	23	65.1%
Died	4	11	5	3	0	0	0				
1926—Lived	0	8	27	17	4	0	0	106	56	50	52.8%
Died	7	15	21	6	1	0	0				
1927—Lived	0	11	24	30	4	0	6	138	75	63	54.3%
Died	7	19	19	8	1	1	8				
1928—Lived	1	8	49	41	15	2	8	167	124	43	74.2%
Died	2	16	12	5	2	1	5				
1929 to July 1st—Lived	3	11	58	50	10	0	6	190	139	52	72.6%
Died	6	18	16	12	0	0	0				
Totals								761	475	286	62.4%

* Approximately 75 per cent of these admissions were charity cases.

birth to the time of death, and involved the whole body. It occurred in six cases, in four of which necropsy was performed. Of the latter, three showed marked atelectasis in addition to severe intracranial hemorrhage. The average age at death was one and one-half days.

(2) *Intermittent.*—In all of these cases, cyanosis occurred in severe attacks, sudden in onset, with marked prostration, and lasted from a few seconds to ten or fifteen minutes. Between attacks, the skin frequently had a marked purplish-red tinge; this was noticeable especially in those infants who died during the first two days. They were classified in two groups, according to the age at death.

(a) Those who died in the first three days of life: Fourteen necropsies were performed in this group, a definite subarachnoid hemorrhage below the tentorium, especially marked about the cerebellum or brain stem, or both, was found in each case. Seven infants in this group also had some cortical hemorrhage.

In another series of cases studied at a later period, in which the intermittent cyanotic attacks were similar to those described in group (a), the days of life were seemingly prolonged by early and repeated spinal drainage.

(b) Those who died after the tenth and before the twenty-seventh day of life: This group had cyanotic attacks occurring from the first to the third day, similar to those in group (a), although usually not so severe. Then followed a free interval in which attacks did not occur until about the seventh day. From the seventh to the eighteenth day, which was the usual length of life, there was a recurrence of the attacks, which became more frequent prior to death. In all probability, infection was a contributing factor. There were six cases of this type, in five of which a pathologic examination was made; infratentorial hemorrhage as described in the foregoing observations was noted in all the cases, in addition to an overwhelming infection and sepsis, such as purulent otitis media, mastoiditis, and pneumonia. Several infants in this group had a severe jaundice before death. Apparently they temporarily resisted the effects of the hemorrhage, then developed an infection which proved fatal.

(3) *Sporadic or Occasional.*—Transient cyanosis of varying degree may be associated with chilling, overheating, inanition, over or too rapid feeding, abdominal distention, or other causes, resulting in exhaustion. Congenital heart conditions may tend to such attacks.

To institute rational therapeutic measures, it is important that the causative factor be definitely determined. With this knowledge it is often possible to eliminate the cause and thereby prevent recurrent attacks.

Appreciating the frequency of this condition in premature infants, we should carefully watch them for signs of cyanosis. This is more particularly applicable to the very small infants and the larger infants showing signs of immaturity for their fetal age.

Attacks are frequently seen during feedings. These are often due to too rapid feeding and exhaustion and may necessitate the institution of catheter feedings. If caused by aspiration of food, an effort should be made to dislodge it without undue use of violence.

It cannot be too strongly emphasized that the manipulations used to relieve cyanotic attacks should be the minimum necessary to accomplish the result. As most of the attacks are due to exhaustion, although the underlying causes may be varied, attempts to restore the infant are best made without picking up the infant. When artificial respiration is resorted to, manipulations should be very gently applied. Viable infants will, in most instances, overcome their cyanotic attacks spontaneously. Overstimulation by the use of drugs is dangerous. Inhalations of aromatic spirits of ammonia, 1 or 2 drops of which, on cotton or gauze, are held before the nostrils; or adrenalin hydrochloride, hypodermically, in 5 mm. doses of 1:10,000 solution, are effective. In the presence of repeated attacks, the administration of oxygen is recommended. A small catheter is inserted into the nostril and an average of 80 bubbles a minute is allowed to flow. The Henderson carbon dioxid-oxygen apparatus is very efficient. Hot baths, plain or mustard, require too much manipulation and often are more of a shock than help; they should be reserved for special indication.

Marked *apathy* was present at times in all infants who died, especially those in the group with intracranial hemorrhage. It was present to a lesser degree in all living infants.

Sixty-five per cent of those infants having infections showed little, if any, rise in body *temperature.* The infections were chiefly those of the upper respiratory tract, otitis media, pyelitis, and pneumonia. A rise in temperature does not necessarily occur as a symptom of infection, as some of the most severe examples had a normal or subnormal temperature. Subnormal temperatures are often indicative of a poor prognosis, especially in the smaller infants.

Marked *jaundice* is a frequent symptom in the premature. There are two types of severe jaundice—that which occurs during the first two weeks of life, and which becomes increasingly evident during or after the second week. In

the former, among our fatal cases, intracranial hemorrhage, complicated by infection, was a frequent combination. In the second group, infection appeared to be the predominating factor.

Severe and persistent *vomiting* may be present in cases of intracranial hemorrhage, more especially of the infratentorial type and in systemic infections. Abdominal distention, gastric irritability, and pylorospasm may all result in repeated attacks. Toxemia of pregnancy is a common cause of vomiting in the fetus.

Table 4

Data of Vitality

Birth weight in grams	Total admissions	Surviving first 24 hours, number	Surviving first 96 hours, number	Graduated		Graduated infants surviving first day
				Number	Per cent	
Less than 1000	42	18	14	4	9.5	22.2%
From 1000 to 1500	148	92	91	52	35.1	56.5%
From 1500 to 2000	280	242	239	193	68.9	79.7%
From 2000 to 2500	197	183	181	157	79.7	85.7%
From 2500 to 3000	42	39	39	38	90.5	97.4%
Over 3000	4	4	4	2	50	50%
Unknown	48	46	40	29	60	63%
Totals	761	626	594	475	62.4	75.88%

any premature who is vomiting and if present, is relieved either by enema or lavage.

Diarrhea was present in 95 infants, of whom 41 died. Of these 11 deaths followed the feeding with whole cows' milk in the belief that it was human milk. This was due to the dishonesty of a wet nurse.

Table 5

Mortality as Related to Place of Birth

1922–1926 (266 Cases)

Birth weight in grams	Born at home	Living	Dead	Born in hospital	Living	Dead
Less than 1000	18	0	18	5	0	5
From 1000 to 1500	36	10	26	29	12	17
From 1500 to 2000	50	32	18	52	30	22
From 2000 to 2500	19	10	9	32	26	6
From 2500 to 3000	6	6	0	4	3	1
Unknown	11	7	4	4	2	2
Totals	140	65	75	126	73	53
Mortality	53.5%	..	..	42.0%	..	..

1927 to July 1, 1929 (399 Cases)

Less than 1000	6	1	5	9	2	7
From 1000 to 1500	38	6	32	33	19	14
From 1500 to 2000	68	43	25	69	54	15
From 2000 to 2500	29	23	6	83	71	12
From 2500 to 3000	13	10	3	14	14	0
Over 3000	..	..	..	4	2	2
Unknown	27	16	11	6	4	2
Totals	181	99	82	218	166	52
Mortality	45.3%	..	..	23.9%	..	..

About seventy-five per cent of all prematures regurgitate some feeding during the first three days. Vomiting is treated by an immediate decrease in feeding. Feeding is decreased to the point where the infant retains all of its feeding. The feeding is then increased *very* gradually. It is sometimes advisable to discontinue water between feedings until vomiting is stopped. Infants who vomit often do better on small concentrated feedings than on diluted milk mixtures. While on a concentrated diet, water or tea should be given between feedings.

Abdominal distention is always looked for in

The infant is starved from 12 to 24 hours depending on the severity of the diarrhea. Weak tea is given by mouth (one-third to one-fifth of body weight) during 24 hours. The baby is fed tea every 30 to 60 minutes if necessary. If un-

able to give a sufficient amount of tea by dropper or bottle, the infant is gavaged for 24 hours.

Feedings are then started. The premature is fed every 3 hours, starting with a very small amount, 3 to 8 c.c. usually, of one-half skim lactic acid milk and one-half breast milk. If no breast milk is available, undiluted skim lactic acid milk is given. No carbohydrates are added.

Feedings are increased by 2 to 5 c. c. as the infant's reaction to the increased diet warrants. During this gradual increase, from 30 to 60 c. c. of tea are given between each feeding.

We have found 6 to 15 c. c. of whole blood given intramuscularly to be of great value in these dehydrated and toxic infants. It is usually given every second day. Saline solutions given subcutaneously have been largely discontinued since we have adopted feeding with weak tea in large amounts.

Twitchings (indefinite symptoms) occurred at times in infants suffering from various conditions. Numerically, they were not more frequent in the cases in which hemorrhage occurred than in the others. This was probably explained by the early death among the patients with severe cases of intracranial hemorrhage.

Generalized *convulsions* in the very young infants are most often due to intracranial hemorrhage and infection. Anoxemia and gastro-intestinal upsets rank next in importance. In the older premature, tetany should always be thought of as a possible cause since this condition develops at a much earlier age in the premature than in the full-term infant.

Otitis media was a frequent finding, being present in 75 infants, of whom 36 died (with complications). Four of them were operated on for mastoiditis, all of whom died.

Upper respiratory infections were noted as a frequent complication. Pneumonia was diagnosed 66 times, and 40 of the infants died.

Empyema was diagnosed in two infants; one was operated on by the closed method and recovered; and one died.

Congenital syphilis was diagnosed in a surprisingly small number of cases, notwithstanding the fact that a Wassermann test was made in one or both parents, with few exceptions. Positive diagnosis of syphilis was established in twenty-eight cases, of whom thirteen died. Eleven of these showed no outstanding clinical signs.

Pyelocystitis was diagnosed in nineteen infants and in this group only one death was recorded. Two infants developed severe nephritis, and one died.

Cerebral hemorrhage was diagnosed in ninety-two infants, either clinically or at autopsy, or both. Twelve of these infants recovered. It is interesting that among the large group of infants visiting our clinic for station graduates, not more than four show evidence of intracranial hemorrhage. Of eighty infants of whom a diagnosis of intracranial hemorrhage was made at autopsy, the location of the hemorrhages was as follows: Supratentorial, 21; infratentorial, 42; intraventricular, 4; diffuse hemorrhage, 13.

Meningitis was diagnosed in five infants, all of whom died.

True hydrocephalus was diagnosed in five infants, of whom two died before leaving the station.

Megacephalus was a frequent clinical finding which gradually disappeared with the infant's development. The conception of the megacephalus of the immature infant is credited to Yllpö,[4] who explained it by saying that the brain continues to grow independently of the rest of the body and reaches its normal size, but because of slow growth and development of the body, the head seems disproportionately large; in other words, the head is normal, but the body is subnormal in size. It is possible, however, that the megacephaly of the later months is a summation of the effects of immaturity and of rickets.

Pyodermia, of severe degree, was present in 22 infants, of whom 7 died. All developed other pathologic conditions.

Autopsy Findings

Postmortem examinations were made of 183 infants, out of a total of 262. The findings in these cases are recorded in Table 10, grouped according to birth weight and in Table 11, grouped according to age at time of death.

The malformations recorded in the autopsy reports were as follows: Congenital heart deformity, 4; horseshoe kidney, 5; Meckel's diverticulum, 2; cleft palate, 3; clubfeet, 5; spinabifida, 1; diaphragmatic hernia, 1; bifid-uvula, 1; supernumerary digits, 2; and congenital absence of sternocleidomastoid muscle, 1.

Other unusual pathologic findings noted were: one case of perforation of the stomach, associated with acute phlegmonous gastritis, with death at the age of 4 days; early juvenile paresis in a syphilitic infant, who died at the age of 10 days; hemorrhage into the thymus in an infant 9 hours old at death; multiple rhabdomyoma of the heart in a 15-day old infant; serous cysts of the ovaries in a 42-day old infant; one case of tuberculous lung abscess, and one case of infarct of the lung.

In 104 autopsies in which special attention was

paid to the thymus gland, only 5 cases were reported as showing marked hypertrophy.

Cerebrospinal Fluid of Premature Infants

In the study of the spinal fluid in intracranial hemorrhage of the new-born, premature infants offer perhaps the best material as subjects of investigation, not only because intracranial hemorrhage occurs so frequently in these infants, but also because permission for postmortem examination is more easily obtained than in any other class of hospital patients. The latter is important if clinical observations are to gain significance by correlation with subsequent observations at necropsy.

For a period of one year, Jerome Glaser[5] made a careful study of spinal fluids from lumbar puncture at our premature-infant station. One hundred infants were studied and 129 lumbar punctures performed, 49 per cent of which were made during life, and the remainder immediately after death.

The explanation for the frequency of faulty lumbar punctures in premature infants was shown to be the detachment of the posterior wall of the dura mater spinalis by the entering needle and the pushing of the posterior wall against the anterior wall, without perforating it, resulting in a dry tap. If the needle pierces both layers of the dura and enters the venous plexus on the posterior wall of the canal or the highly vascular body of a vertebra, a tap contaminated by traumatic blood usually results. It is suggested that this may be the explanation of occasional unsuccessful punctures in older children and in adults.

Table 6

Average Initial Loss of Weight in Grams

Birth weight in grams	Breast milk	Breast-skimmed lactic acid milk
Less than 1000	.....	62.5
From 1000 to 1500	98	113.5
From 1500 to 2000	173.8	130.9
From 2000 to 2500	178.1	132.8
From 2500 to 3000	231.8	220
More than 3000	430	.....

Table 7

Day on Which Birth Weight Was Regained*

Birth weight in grams	Days
Less than 1000	14
From 1000 to 1500	18.6
From 1500 to 2000	14.4
From 2000 to 2500	11.8
From 2500 to 3000	12

* These figures represent infants who were eight days of age or under when received at the station.

Based on anatomic and physical considerations, a technic was developed by Glaser, by which the percentage of faulty lumbar punctures in these infants was reduced from thirty-five to twenty per cent.

The principle of the technic consists in the employment of a small hypodermic needle (No. 27) for performing the puncture and having the infant held in a sitting position so that the lumbar portion of the dural sac is distended by the pressure of the column of fluid within it. The average amounts removed for complete examination varied from 1.25 to 2 c.c.

The mid-line of the third or fourth interspace was chosen for insertion of the needle because of the ample distance between the spines. The needle was inclined slightly upward and it was found to be advantageous to rotate it slowly on its long axis as it was pushed forward. After the needle was inserted on an average of from 12 to 15 mm., depending on the size of the infant, the wire was withdrawn. If the fluid is not thickened by blood or other substances, it appears within from 10 to 15 seconds, depending on the pressure. When the fluid does not appear, the wire is reintroduced and the needle inserted slightly farther. Often a distinct snap can be felt as the needle pierces the dura. If the resistance of the anterior wall of the vertebral canal is felt, or if the fluid contains blood, the needle is withdrawn and a new puncture is made one vertebral space higher.

Table 8

Average Length of Stay in Hospital

Birth weight in grams	Days in hospital
Less than 1000	83
From 1000 to 1500	45.7
From 1500 to 2000	30.5
From 2000 to 2500	19.9
From 2500 to 3000	16.8
Over 3000	15
Unknown	49.8
Average	39.2

Occasionally, when fluid did not appear spontaneously, success was obtained by attaching a 2 c. c. syringe. As the needle is slowly withdrawn the piston is gently pulled, and not infrequently a point is reached where the spinal fluid appears in the syringe. The syringe is useful also in case the fluid comes too rapidly, as there is often difficulty in replacing the fine wire obdurator; or if it is replaced, fluid may leak around it.

Ill results have not been seen from the employment of this technic on living premature infants, and the procedure has often been of great value in the diagnosis and treatment of cerebral hemorrhage.

The presence of red blood cells in microscopic numbers in the cerebrospinal fluid of premature infants during the early days of life is so common that it may be considered as a physiologic phenomenon. At lumbar puncture, it is not always possible to distinguish between fluids bloody as the result of trauma and fluids which contain blood as the result of intracranial hemorrhage.

In a series of twenty-six cases of cerebral hemorrhage proved by necropsy, the cerebrospinal fluid obtained by lumbar puncture was grossly bloody or hazy in nineteen cases, or seventy-three per cent.

In a series of forty-two cases in which evidence of cerebral hemorrhage was not found at necropsy, the spinal fluid was grossly bloody or hazy in thirteen, or thirty-one per cent, of the cases. This percentage is sufficiently high to indicate the danger of making a diagnosis of cerebral hemorrhage on the basis of bloody spinal fluid withdrawn by lumbar puncture alone.

It was also shown that clear spinal fluid may be obtained in certain cases of subpial hemorrhage.

Crenated red blood cells in cerebrospinal fluid were regarded as cells which were in the fluid prior to the time of the lumbar puncture at which they were obtained.

As an aid in making the differentiation already mentioned, it is shown that if the proper precautions are taken to avoid hemolysis, the benzidin test on the supernatant fluid, after it has been centrifuged, will be positive in about fifty per cent of these cases in which cerebral hemorrhage is present; and negative, if the blood is of traumatic origin.

Glaser found that yellow pigmentation or xanthochromia of the cerebrospinal fluid of premature infants occurs so constantly during the early weeks of life that it may be considered as a physiologic phenomenon. The icterus index can be used as a method for estimating quantitatively the degree of xanthochromia. The icterus index of the cerebrospinal fluid of premature infants is highest during the second week of life. The color of these fluids is presumably not due to hemoglobin or to bilirubin but Glaser believes that it is probably caused by a pigment intermediate in composition between these two.

Cerebral hemorrhage probably contributes to the degree of icterus neonatorum, and unrecognized cerebral hemorrhage is perhaps the cause of some cases of so-called physiologic icterus neonatorum.

A positive direct van den Bergh's reaction of spinal fluid is strongly suggestive that the patient has had an intracranial hemorrhage.

Description of Station

The station at the Sarah Morris Hospital consists of four rooms, one of which is used for normal infants, one for infected cases, a third for infants who are being prepared for removal to their homes, and the fourth as a breast-milk pumping station and supervisor's office. The station has a capacity of twenty-two infants. There is no special provision for ventilation and humidity, the ventilation being supplied by transoms and doors as in ordinary hospital wards; when indicated, the air is moistened by the sprinkling of sheets suspended from a metal screen frame. The special equipment consists of sixteen electrically-heated, water-jacketed beds; electrically-heated dressing tables; a hygrometer; a thermometer for registering high and low temperatures; a time clock, and a quartz lamp. Three or more wet nurses are required to supply the breast milk used in the station, as all the young infants are fed with human milk. No infants are nursed at the breast. The wet nurses empty their breasts at regular four-hour intervals, five times a day, with an electrically-driven pump or by hand expression. If there is any doubt of the quality of the breast milk, it is boiled for one minute. We believe that one of the great advances made in the institution has been in the nursing care of the infant. This has been made possible by the endowment of the institution by the Infant Aid Society of Chicago, which provides the salaries for the nurses, and which also furnished the major portion of the equipment for the station.

The infants are under the care of a graduate nurse who has under her direction a second graduate nurse and five nursery helpers, trained to meet the special needs of immature infants. The nurses are permanently on duty in the station. Nurses in training are not used in this service, an exception being made for undergraduate or postgraduate nurses who especially desire this training.

During the infant's stay in the hospital, a nurse visits the home or meets the mother at the hospital and instructs her in the care of her breasts, so as to maintain the supply of breast milk whenever possible.

Regular four-hour expression is encouraged, the mother being supplied with sterile bottles so that she may bring her milk to the station. As soon as the infant's physical condition permits,

the mother is asked to come to the station at stated times to receive instruction in the care of her small infant and to nurse her infant directly at the breast if its condition warrants it. When possible, she is encouraged to make a daily visit. This stimulates the milk supply and encourages the mother in her effort to produce milk for the future use of the infant. It also has a valuable educational feature, so far as the infant is concerned.

Before the infants are discharged from the station, the worker visits the home and instructs the mother in the necessary preparation for the infant's return. Following the discharge from the hospital, the social worker visits the home and instructs the mother in the necessary preparation for the infant's return. Following the discharge from the hospital, the social worker visits the home one or more times weekly, as may be indicated, until the infant's health and the weather conditions make visits to the special clinic held for them at the Sarah Morris Hospital advisable. This applies only to those infants who do not have a private physician, and to those whose private physicians desire them to be taken to the clinic.

The majority of the infants are fed with a medicine dropper until they are strong enough to take food from a bottle. Catheter feeding is instituted when feeding by the dropper precipitates repeated attacks of cyanosis. A catheter (No. 10 French, No. 8 American, No. 5 English) about fourteen inches in length may be attached to a small funnel, graduated glass tube, or, in case of emergency, the glass barrel of a small syringe may be used. All food should be carefully measured and administered slowly with a *minimum elevation* required to obtain a free flow of the milk. The infant should be upon its back on a flat surface with the head either in the median line or turned to the right. The passage of the catheter is usually effected without difficulty by passing it in the mid-line to the pharynx, and gradually pushing it into the esophagus. The poorly developed reflexes rarely cause retching. The distance to which the catheter is to be passed is of great importance when we consider that this procedure must be repeated at least six to eight times for feeding and not infrequently as often for water, daily over a considerable period of time. It has been our rule to measure the distance from the bridge of the nose to the tip of the ensiform cartilage, which is usually in the neighborhood of 12 to 15 cm. (Full-term, newborn infants average about 16 cm.) The catheter is marked at this point with indelible ink, and is passed to this point, or about one cm. farther than this distance, which permits it to reach the lower end of the esophagus just above the cardia, from which point the food will flow through the patent cardia. We thereby avoid irritating the gastric mucosa and stimulating the reflexes at the cardia. One soon learns the distance the catheter can be passed in each case in order to avoid retching. The milk is now permitted to flow into the stomach slowly, the funnel being raised only slightly above the level of the body, usually six or eight inches will suffice. After the feeding the catheter is firmly compressed to avoid spilling milk into the pharynx during its removal. The infant should be turned on its right side following the feeding.

When the stomach is noticeably distended with gas before feeding, the catheter should be passed 1 or 2 cm. farther than the mark on the catheter before starting feeding, in order to allow the gas to escape. It is then retracted as directed and feeding started.

The question of when to start regular feeding is of great importance to these infants, because of the tendency to develop acute inanition. Therefore, a regular feeding regimen must be started early. Human milk is essential to a low mortality.

It is our custom to withhold milk for twelve hours from infants received shortly after birth, until the respiratory and circulatory functions are well established. During the second twelve hours, two or three feedings of breast milk may be given if the infant's condition warrants.

Feeding Schedule Premature Department Sarah Morris Hospital

(First 12 hours after birth: no feeding, neither milk nor water.)

Second 12 hours after birth:

1st hr.	Boiled water	2-6 c. c.
4th hr.	Boiled water	2-6 c. c.
6th hr.	Breast milk	2-6 c. c.
8th hr.	Boiled water	2-10 c. c.
10th hr.	Breast milk	2-10 c. c.
12th hr.	Boiled water	2-10 c. c.

Infants received several days after birth, which is true of many of our cases, must, of necessity, be fed according to their condition when received at the station. The first few feedings should be minimum. Dehydration is often marked and demands special consideration.

The second to the tenth day may be grouped together as the second feeding period for practical purposes.

From the second day the infants should be fed regularly day and night, the number and time of feedings depending to a great extent on whether

the food is given with or without the use of a catheter; on the gastric capacity, and on the infant's general condition. Practically all our infants at first receive eight feedings daily with water or weak tea between feedings.

it is always started on a very small quantity of feeding and feeding is increased gradually, never over three c. c. at one feeding.

Every premature is an individual feeding problem. Any premature who is vomiting or

Table 9

Pathology Noted in Hospital Records
1927 to July 1, 1929 (399 Cases)

	Times observed	Died		Times observed	Died
Cyanosis	138	85	Omphalitis	5	5
Diarrhea	95	41	Peritonitis	1	1
Otitis	58	36	Erysipelas	5	2
Mastoid operations	4	4	Cellulitis	3	2
Pharyngitis	8	0	Pemphigus	1	1
Coryza	8	2	Pyodermia	22	7
Cervical adenitis	2	0	Septic arthritis	2	2
Bronchitis	2	0	Cleft palate	2	1
Pneumonia	66	40	Club-feet	2	0
Empyema	2	1	Congenital heart	4	2
Congenital syphilis	27	12	Hyperemesis	23	7
Nephritis	2	1	Pyloric stenosis	1	1
Pyelitis	6	1	Hernia (incarcerated)	1	1
Icterus (marked)	34	10	Enlarged thymus (x-ray)	3	0
Cerebral hemorrhage	86	74	Thrush	40	0
Melena	5	2	Edema	3	1
Subperiosteal hemorrhage	1	0	Hydrocephalus	4	2
Angioma	6	0	Paralysis brach. plex.	1	1
Sternocleidomastoid hematoma	1	0	Hematocele	1	0
Athrepsia	38	7	Gonorrheal conjunctivitis	2	0

Beginning (in most cases by the second day) with from 20 to 40 c. c. of human milk per kilogram of body weight, the quantity may be increased from 8 to 15 c. c. daily per kilogram until, usually by the tenth day, feedings averaging from 80 to 140 c. c. per kilogram can be given.

Further fluids, preferably inert, such as water or weak tea, are administered to compensate for the loss of body fluids through the kidneys, bowels, lungs, and skin. The infant requires about one-sixth of its body weight of water, inclusive of that contained in the milk, in twenty-four hours while in the heated bed. Such quantities, however, should not be attempted on the first days; usually it will be possible to approximate one-eighth of the body weight in total fluids by the fourth day. The early feedings must necessarily be small and the increased feedings given gradually. The infants must be considered individually, as it is impossible to formulate definite rules for feeding, at least during the first ten days.

Feedings are increased according to the size of the premature and to the infant's food tolerance. The smaller and the more premature the infant the more slowly the feeding is increased. For any premature under 1000 grams the feeding is never increased more than one c. c. at a time. Irrespective of the size of the premature, having cyanotic attacks is given a much slower increase in feeding. The following should be kept in mind:

1. We must have a definite idea of the minimum food requirements for life.

2. The amount of food necessary to maintain at least a stationary weight must be given.

3. The amount of food needed to meet the requirements for growth and development must be given.

Approximately one-seventh of the body weight in fluids and human milk of a food value of 70 calories per kilogram every twenty-four hours are required to maintain life. Little can be expected in the way of increase in weight until 90 calories are reached, and depending on the weight, body surface, and physiologic development, the later needs of the infant will approximate from 100 to 110 calories per kilogram of body weight. After the first month as much as 120 calories may be needed. In exceptional cases, it may be necessary to feed breast milk in amounts equaling from 160 to 200 calories per kilogram. Such infants are usually markedly underweight for their fetal age.

As soon as possible feedings are so increased that the infant is getting 90 to 100 calories per kilogram and from one-sixth (minimum) to one-fifth of the body weight in fluids (including

water). This is often accomplished by the tenth to the twentieth day.

To fulfill all their needs, infants will, therefore, require from 140 to 180 c. c. of breast milk per kilogram, or about one-seventh to one-sixth of their body weight daily. They can, however, maintain life on 100 c. c. and hold their weight in most cases on 130 c. c. per kilogram.

Skimmed lactic acid milk (buttermilk) is routinely added to the feedings of many of the infants. Such additions are usually started on the fourth or fifth day. The lactic acid milk used in our station is prepared by the addition of a lactic acid bacillus culture to sterilized skim milk. Powdered skim lactic acid milk can be used.

It is not advisable under the first month to feed the premature more than 120 to 140 c. c. of breast milk or mixed breast milk and skimmed lactic acid milk per kilogram. After the first month, the feeding can be increased to 140 to 180 c. c. per kilogram, if necessary. If the premature is fed the minimum amount of food necessary to make it gain, there is less danger of a feeding disturbance.

For the nurse's instruction, the food and water to be administered should be noted each day, in writing, after a thorough inspection of the infant and its clinical chart.

The diet of the premature infant making a satisfactory gain in weight should not be changed arbitrarily without a well-defined indication.

Usually by the twenty-first day the food requirements of the infant are well established and a careful observation of the weight, stools, disposition and, which is equally important, its body temperature will decide the future food requirements. The water requirement will, to a great extent, be dependent on the supply of artificial heat and the presence of fever.

As the infant takes on weight and becomes fat, with a rounding of the features and the body, as is the case in premature infants successfully fed on breast milk, the total amount of the milk administered can be held at one sixth and not infrequently one-seventh of the body weight, and normal increases in weight can still be maintained.

Although the diet of a nursing mother of a full-term infant may, in many instances, be unrestricted, it is not so with the mother of the premature or the wet nurse who may be supplying the breast milk. The following articles of food are excluded from the diets of the wet nurses in our station: highly spiced or seasoned foods; fried foods: also cabbage, turnips, cauliflower, onions, and sauerkraut. The following fruits are recommended: oranges and bananas, also stewed fruits. Constipation should be relieved by mineral oil or enemas.

Artificial Feeding

In the feeding of premature infants there can be no comparison between the results to be expected from human milk and those to be obtained with artificial food. This is especially true of infants with a weight below 1500 grams. Many varieties of artificial diet have been suggested by different clinicians, such as simple milk dilutions, cream and top-milk mixtures, skimmed milk, and buttermilk preparations. To these diluted mixtures carbohydrates are added. The results with these various diets are to a great degree dependent on the physician's intimate

Table 10

Observations at Autopsy in 203 Cases (286 Deaths)

Pathologic change	Cases grouped according to birth weight in grams							
	Under 1000	From 1000 to 1500	From 1500 to 2000	From 2000 to 2500	From 2500 to 3000	Over 3000	Unknown	Totals
Intracranial hemorrhage	11	31	25	12	..	..	1	80
Atelectasis	20	46	23	17	..	..	6	112
Bronchopneumonia	2	9	20	11	..	..	7	49
Icterus (marked)	..	1	1	1	..	1	1	5
Syphilis	1	2	7	2	..	1	..	13
Otitis media	2	5	14	7	1	1	5	35
Mastoiditis	..	2	6	..	..	..	2	10
Meningitis	1	2	1	1	..	..	..	5
Omphalitis	..	1	1	..	..	1	..	3
Peritonitis	..	..	..	..	..	..	1	1
Pemphigus	..	1	..	..	..	..	..	1
Cellulitis	..	..	..	1	..	..	..	1
Epicarditis	..	1	..	..	..	..	..	1
Thymus (hypertrophied)	..	1	1	3	..	..	..	5
Malformations	1	4	7	6	..	..	2	20
Hydrocephalus	..	1	1	..	..	..	..	2
Athrepsia	..	1	3	..	..	..	3	7

understanding and directions for the use of the individual food.

It should be remembered that the figures quoted for the feeding on breast milk are the maximum that can be assimilated and are excessive quantities for artificial feeding in the first weeks of life. When artificially fed, these infants must at all times be closely watched for evidence of overfeeding, and the first evidence of digestive disturbances or of intercurrent infections should lead to the feeding of human milk, whenever possible.

From the foregoing statement, it is evident that smaller and slower increases in weight may be expected of the artificially fed.

Our best results with artificial feeding have been obtained by the use of concentrated mixtures, which precipitate with a finely divided curd. We have found a low fat content desirable in such mixtures. When fresh sweet milk is used as a basis, it should be boiled for five minutes over a direct flame. Boiling is not necessary when lactic acid milk is used. Lactic acid milk, prepared by culture or by the addition of USP lactic acid, precipitates a fine curd. In our diet kitchen, all lactic acid milk is made from pasteurized sweet milk by culture. Our mixtures are at first made from skimmed milks and later similar whole milks are added in graduated amounts to replace the skimmed milk. Evaporated milk, dried sweet or lactic acid milk, or condensed milk can be used when safe sweet milk is not available.

Carbohydrates are at first added in amounts of two per cent and this is increased to five per cent as required. Raw egg yolk is added to the milk mixtures of the infant who is one month of age, in the amount of one yolk to each quart of milk.

To counteract the effects of boiling, the feeding of orange juice should be instituted by the third week, beginning with five drops daily and increasing to two tablespoonfuls, twice daily, by the end of the eighth week. Cod liver oil, as an antirachitic, should be fed before the end of the third week, beginning with two drops daily and increasing to sixty drops daily by the eighth week. It is best divided into two feedings. Irradiated ergosterol has been used experimentally in a considerable group of our infants—starting with two drops daily and increasing to fifteen drops daily by the eighth week, using the preparation standardized to one hundred times the vitamin D content of cod liver oil. It is our impression that the infants show better progress when it is used in combination with cod liver oil.

To meet the iron requirements of these infants, we add raw egg yolk to the diets of both breast and artificially fed infants. We find further benefits are derived from the addition of one-half grain doses of carbonate of iron or iron and ammonium citrate daily by the fourth week. The latter is usually tried because it can be used from a stock solution kept in the ward.

As early as the third week, all infants are exposed to ultraviolet rays with the quartz lamp. The time of exposure varies with the indications in the individual case. At first these exposures should be limited to fifteen seconds and it is rarely necessary to give more than two-minute exposures three times a week. Over-exposure may result in irritability, vomiting, and increased body temperature. The dose also varies with the amount of viosteral and cod-liver oil fed.

Infants Graduated From the Station

The mothers of the artificially fed infants are given instruction in the preparation of the feeding by the dietitian in the hospital milk station and in the routine care of the infant by the nurse in charge, before the infants are discharged. Following their discharge, the social service nurse visits the infant in the home. As soon as the infant's condition permits, the mothers are encouraged to bring them to the hospital clinic for graduate infants. The infants are weighed, examined, and the necessary instructions given as in any other infants' clinic. Exposure during examination is avoided. As the infants grow older, longer intervals between visits (four or six weeks) are allowed. After reaching the age of two years, they are transferred to the infant clinic at the Michael Reese Hospital Dispensary.

The majority of infants are artificially fed when leaving the station, although in all cases, unless directly contraindicated, the mother has been encouraged to keep her breast secretion constant by means of expression. If the mother has been able to keep her supply of breast milk, the infants are fed at the breast on leaving the station. Complementary feedings are prescribed when necessary. Egg yolk, boiled milk, and carbohydrate mixtures are most often used and are usually started before the infant leaves the station. The egg yolk is added after the milk has been boiled and again cooled. In the artificially fed infants, we usually continue on this formula, varying the strength throughout the first year. Six feedings in twenty-four hours are usual after discharge from the station. The average amount of milk fed varies with the infant, being usually from 100 to 130 c. c. with from 6 to 7 grams of sugar or equivalent amounts of corn syrup added for each kilogram of body weight (milk, 1½ to 2 ounces, and

sugar 1½ to 2 drams per pound). The amount of water added depends largely on the infant. Some infants who are able to retain only small feedings are fed concentrated mixtures, additional water being fed between feedings. From 8 to 12 c. c. (2 to 3 drams) of cod liver oil in one or more doses is given daily, or irradiated ergosterol, of which the average amount is 10 to 15 drops daily. In our ward cases we prefer to combine them, using a smaller amount of the latter. Orange juice is also given daily in amounts of from 20 to 45 c. c. Iron is given to combat the anemia invariably present in these infants. One or two grains of iron and ammonium citrate is the preparation used.

Cereal is added to the diet at about the fifth month of life. Vegetable soup is given by the seventh month. During the last of the first year, these infants may be fed much as full-term infants.

Prognosis

Of 761 infants admitted to this station, 475 lived and were transferred to their homes (Table 3). This represents 62.4 per cent. If we exclude the patients who died in the first twenty-four hours, 75.88 per cent survived. The high mortality of the first twenty-four hours, in large part due to birth trauma and immaturity, is influenced greatly by outside factors, such as previous care and transportation.

At the present time, of the 475 graduated infants, 232 are in attendance in our clinic for graduates, 51 others have been transferred to the care of their private physicians, and 21 are out-of-town patients. We have records of the deaths of 63, and the remaining 108 have failed to coöperate or could not be located.

The cause of death in the 36 cases were recorded as follows: pneumonia, 16; pneumonia, complicated by measles, 3; syphilis, 2; peritonitis, 2; meningitis, 1; otitis and septicemia, 3; erysipelas, 2; athrepsia, 1; and unknown causes, 6.

Among the graduates recovering from serious illnesses, we have the following records: measles, 17; pertussis, 9; tonsillectomy, 2; syphilis, 1; diarrhea, 25; pneumonia, 8; otitis, 3; surgical conditions, 2; anorexia, 1; vomiting, 2; and tetany, 1.

Future Development

Although many of the infants show minor or moderate degrees of rickets, only a small number have developed marked manifestations. We believe that this is due to the cod liver oil and quartz light therapy, introduced when the infants were two or three weeks of age. We have had no cases of rickets in which mechanical appliances or surgical intervention were necessary to correct deformities.

Megacephaly, as evidenced by the disproportion between the head and the trunk, becomes less evident after the sixth to the eighth month, unless there is marked rickets or the occasional true hydrocephalus.

Associated with the large skull and wide open fontanelles and sutures, exophthalmos is frequently seen. The latter probably results from the lack of skull capacity, the eyes being protruded, with prominent cornea and, not infrequently, dilated pupils. Further characteristics of the head are a broad face, and mouth, nose, and eyes which appear closely set together; the nose is stumpy and small and rises but little above the face; the tongue is often large and

Table 11

Observations at Autopsy in 203 Cases (286 Deaths)

Pathologic change	Cases grouped according to age at time of death					
	1st day	2 to 7 days	7 to 21 days	21 to 30 days	30 to 60 days	Totals
Intracranial hemorrhage	37	27	11	3	2	80
Atelectasis	59	28	15	4	6	112
Bronchopneumonia	4	7	16	13	9	49
Icterus (marked)	..	..	2	2	1	5
Syphilis	3	2	3	2	3	13
Otitis media	2	4	17	6	6	35
Mastoiditis	..	2	3	2	3	10
Meningitis	..	2	2	1	..	5
Omphalitis	1	1	..	1	..	3
Peritonitis	..	..	..	1	..	1
Pemphigus	..	..	1	..	..	1
Cellulitis	..	..	..	1	..	1
Epicarditis	..	..	..	..	1	1
Thymus (hypertrophied)	3	2	..	..	..	5
Malformations	4	3	6	4	3	20
Hydrocephalus	..	1	..	..	1	2
Athrepsia	..	3	2	1	..	6

protruded. All of these characteristics tend to disappear before the end of the second year.

Active signs of tetany did not develop in any of the infants in our series who received sufficient cod liver oil or irradiated ergosterol and ultraviolet irradiation. In cases returned to their homes in which proper therapeutic measures are neglected, late tetany is not uncommon.

Teething in most instances is delayed, as would be expected. Many of our infants erupted one or more teeth during the seventh month. As a group, by the end of the fourth year they closely resemble, in physical appearance, full-term infants of the same age.

In the well-developed fetus which has not been damaged during the time of conception, and which is born at an age compatible with a physiologic development necessary to meet its needs for life and which suffers no undue traumata during or following birth, a normal mental development may be expected. The obstetrician should keep this fact in mind when considering the premature induction of labor: Every additional day of intrauterine life adds much to the infant's opportunity for good physical and mental development. In the consideration of the method to be used in the induction of labor, cesarean section should be given due thought as it is the method of delivery which exposes the infant to least trauma.

Probably the most interesting feature of our work in the field of research and the most valuable contribution to medical science we hope will result from a study of our graduates concerning their physical and mental development in comparison with the normal full-term infant. In this we have the coöperation of a psychiatrist, Dr. George Mohr,[6] and a psychologist, Miss Phyllis Bartelme. Their work is being conducted under the auspices of the Institute for Juvenile Research of the State of Illinois, through the interest of its director, Doctor Herman M. Adler. To date, about one hundred of our older graduates, varying in age from two to seven years, have been included in this study. In fifty cases coming from exceptional homes especially of the poorer class, a sibling was examined as a control.

Psychological investigations of our group indicate that where there is no serious intracranial injury prematurely born children do not differ appreciably in their mental development from their full term siblings or other children in the same station of life.

In conclusion it must be remembered that our clinic is chiefly concerned with the babies whose parents cannot afford private care and who are needful of close medical supervision. Over seventy-five per cent of our cases are of the charitable variety as seen in a large city. It has been our endeavor to return for study every child over two years of age who can be located. Apparently nature has wisely removed most of those not fitted to survive. As to their physical development, while many of them are still under the average for their age most of our group compare quite favorably in their skeleton development with other children of the same age. We have recently finished taking motion pictures of our graduates to demonstrate their physical development and have been able to include 219 of our 232 cases attending the clinic for graduates.

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DIAGNOSIS AND TREATMENT OF THE PYODERMIAS*†

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Dermatoses, in which staphylococci or streptococci are found, are numerous, but ones in which these organisms assume a primary etiologic relationship are few. In the latter group are included erysipelas, granuloma pyogenicum, sycosis vulgaris, infectious eczematoid dermatitis, boils and carbuncles, paronychia, ecthyma, and impetigo contagiosa. While a staphylococcus or a streptococcus is usually characteristically found associated with some of these conditions, the type of infecting organism cannot always be determined by the clinical appearance. It has been demonstrated that while a special streptococcus usually causes erysipelas, an occasional case may be ascribed to staphylococci. Again either staphylococci or streptococci may produce impetigo or both may be present in the same case. The various members of the pyogenic group of diseases depend on the location as well as the type of the infection to produce typical clinical pictures. Thus impetigo is a very superficial infection with an inflammatory reaction. Erysipelas is a deep infection spreading by way of the lymphatics. Sycosis is a pustular fol-

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† From the Department of Dermatology, University of Pittsburgh.

liculitis of the beard, etc. It is further to be remembered that various contributory factors often modify or even to a large extent account for a given clinical picture. Lowered resistance from debilitating diseases, occupational hazards, lack of personal cleanliness, etc., are to be mentioned in this connection. All, however, are pyogenic inflammatory processes caused by the same type of pathogenic agents; all have certain clinical features in common, and are capable of auto- or hetero-inoculation.

The clinical entities offer but little difficulty in diagnosis—detailed symptoms would be but a textbook rehash, and therefore, gratuitous. Laymen readily diagnose boils, carbuncles, and even sycosis under the term of barber's itch, and every one has a pet remedy for these infections, many of which serve to spread infection, as the flaxseed poultice or the assiduous squeezing of localized infections. The tub bath is mentioned to be condemned, as many a case of furunculosis is kept active by the patient's bathing in a suspension of virulent bacteria. The care of these cases should be both local and general. The local treatment may be of various types depending on the location and status of the infection. Abortive treatment with injection of various chemicals is rarely successful. The aim to hasten local necrosis, facilitate drainage, and prevent infection of other areas summarizes therapeutic possibilities in the average case. A hot boric acid alcohol compress is of service. Incision and drainage is time-honored, painful, and rarely necessary where scarring is especially to be avoided. Sharp-pointed applicators moistened in pure phenol are recommended. Phenol is locally anesthetic, antiseptic, and hastens resolution with a minimum of scarring. Particular care is to be exercised in the care of a furuncle on the upper lip on account of the direction of lymphatic drainage. Above all things, these lesions should not be squeezed. Rest in bed is indicated. There should be no manipulation locally until softening occurs, after which simple surgical drainage is established, or better still, drainage established by the phenol applicator before mentioned.

Boils and carbuncles always mean lowered resistance to infection. This may be of varying degree, but in all cases requires corrective measures. Hyperglycemia in association with this group is familiar to all, but why not go a step further. It seems reasonable to restrict sugars in all cases on account of the large localization of sugar in the skin as demonstrated by Folin. But again generalization may be disastrous: certainly one could not treat the multiple infections seen, for instance complicating typhoid, in the same way as a similar condition in a potential diabetic. Treatment must be individualized. Vaccines are used to some extent and are of questionable service. Tonics and reconstructants are indicated.

Notwithstanding the clean-cut clinical features of erysipelas it is not an uncommon occurrence to find this diagnosis applied to a wide variety of conditions not even remotely related to streptococcus lymphangitis. The sharply marginated, peripherally spreading, inflammatory area associated with marked general manifestations can be interpreted in one way only, although mild cases often give considerable trouble in establishing diagnoses. These patients should never (as the writer has seen on more than one occasion) be treated on the ambulatory plan, but should be kept in bed as in any other acute infectious disease. The specific serum, in the opinion of the author, is invaluable in occasionally shortening or aborting attacks, and usually in ameliorating the general manifestations of the infection. In common with most conditions in which the local treatment is not entirely satisfactory, a long list of guaranteed cures is available and most of them are not worth a trial. The local application should be nonirritating, mildly antiseptic, and cooling; iced boric-acid solution on gauze is as serviceable as anything, the nurse being kept busy and the patient amused while nature and the specific serum overcome the infectious process. Whiskey straight, or in a high-ball at intervals, is a most pleasant adjuvant. It is worth mentioning that recurring attacks about the face may often be prevented by treatment of chronic intranasal ulceration, and on the legs by eradication of a persistent dermatophytosis.

A pyogenic granuloma occurring at the site of minor trauma and characterized by a pedunculated, cherry-red, easily bleeding, soft, new growth the writer has seen twice pictured at scientific gatherings as examples of sarcoma in which cures were obtained with x-rays. The diagnosis is simple and the treatment easy and satisfactory. Complete desiccation under local anesthesia leaves nothing to be desired.

Acute infectious eczematoid dermatitis is frequently a diagnostic stumbling block because physicians other than dermatologists have had the condition but rarely called to their attention. For its existence a preëxisting focus of infection such as a discharging ear or a mammary abscess, etc., is necessary. The eruption simulates an exudative dermatitis surrounding the original focus but is auto-inoculable and at the edges the process is seen as discrete follicular inflammatory lesions. A skin sensitization to pyogenic infection exists. The original focus

must be cleared before much headway can be made against the dermatitis. The latter is treated with mild antiseptics instead of the soothing remedies employed in the form of eczema, which it so closely simulates.

Sycosis vulgaris appears characteristically as pustules pierced by hairs, involving the bearded area of males. It is to be distinguished from sycosis parasitica or ringworm of the bearded area which is characterized by deep-seated, low-grade inflammatory nodules or rounded, partly depilated lesions similar to parasitic agminate folliculitis of the glabrous surfaces. Sycosis vulgaris is typically resistant to therapy. Mechanical depilation, massage of antiseptic ointments, and radiant energy are recommended, but apparently mild cases will frequently tax the patience of both the subject and the physician and the therapeutic resources of the latter. The occurrence of lupoid sycosis with characteristic areas of smooth, atrophic, and permanent depilation are particularly resistant and frequently the source of unjust criticism of the physician in charge when x-rays have been used, the degenerative changes being erroneously attributed to overdosage of x-rays. Treatment of this condition is not satisfactory—therapeutic research is indicated.

Impetigo, in common with the other members of the pyogenic group, is not difficult to recognize. The superficial, thin-walled vesicles which quickly rupture to form adherent, stuck-on-appearing crusts overlying exudative bases is a distinctive picture. Bullous impetigo seen usually in infants is, however, frequently misinterpreted until serious complications or the appearance of an endemic forces the proper diagnosis. The first type mentioned usually responds readily to therapy but the prognosis in extensive cases of the bullous variety must be guarded; epidemics with a mortality as high as forty per cent have been recorded. With this in mind and realizing that the more serious infection may have its origin in a rather benign single-crusted lesion, we should repeatedly emphasize that extraordinary precautions are necessary to prevent transmission of infection in every case of impetigo. It is necessary to point out that impetigo frequently occurs as a complication of other conditions such as pediculosis capitis, scabies, etc., and that without recognition and treatment of the primary condition no therapeutic progress will be made. In the ordinary crusted type, removal of all débris from the surface including fringes of loosened epithelium followed by the application of a two-per-cent ammoniated mercury ointment is time-honored and effective therapy. The addition of an astringent such as Burrows's solution (six to ten per cent) is of value. Touching with silver nitrate, etc., is of service. Meticulous cleanliness and mild antiseptics are the keynotes of successful treatment. A valuable application that is but little used today is Alibour water, the formula of which dates back to the reign of Henry IV. It is composed of copper sulphate, 2 parts; zinc sulphate, 7 parts; and camphor water, 300 parts.

In the bullous variety ointments are of comparatively little service. The serum constantly washes the ointment away. Wet antiseptic dressings are preferable. The individual lesions are to be carefully drained and wet dressings of 1 : 3000 permanganate of potash applied until exudation ceases. In cases in which lesions are dry, antiseptic and astringent powders such as aristol or bismuth formic iodid have been found to be of service.

In all of the pyodermias, prophylaxis is of vital importance. It is easier to prevent these infections than to cure them. One's responsibility is not discharged with writing a prescription. Detailed instructions must be issued to even the most intelligent of patients lest taking too much for granted results in disaster.

Jenkins Arcade.

ABSTRACT OF DISCUSSION

Fred D. Weidman, M.D. (Philadelphia, Pa.): Dr. Guy's paper is valuable in point of treatment. I should like to emphasize that if we were to exclude all the remedies which we feel could be dispensed with in the treatment of pyodermias and felt constrained to use just one mainstay, I think that ammoniated mercury would be that standby. It is efficient, and at the same time not irritating. Once in a while, of course, we get those blue moons in the history of human life when the patient is susceptible, but that is an exception.

I have seen one instance in which pyodermia was referable to an internal state in the fullest sense. The patient had multiple abscesses on the skin, and at autopsy it turned out that he had an abscess of the pancreas; and the lesion there was so obviously larger than the others that it was a certainty that it was the primary focus and the lesions upon the skin were the secondary ones.

From the laboratory standpoint, I have seen very marked hyperplasias of the epidermis immediately around some of the more chronic pyodermias which have led laboratory men to the diagnosis of epithelioma. Indeed it was only by following several such cases through their clinical course that I was made to realize that such a mimicry was possible. So I might say that the general laboratory man is not quite informed as to the extent to which the epidermis may become hyperplastic under ordinary pyogenic influences and imitate to a certain extent, or indeed very markedly, the picture of epithelioma.

EARLY DIAGNOSIS OF CANCER*†

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The importance of thorough removal and microscopic examination must be self-evident, but with the introduction of x-ray, radium, and even other methods of diagnosis and treatment many are "losing their heads" and resorting to these.

We note with pleasure that Dr. Joseph C. Bloodgood will deliver an address on "The Dangers of Incomplete Removal of Small and Apparently Innocent Lesions" at the International Assembly, Detroit, Michigan, October 22, 1929. There is no question regarding the great accomplishments of x-ray and radium in diagnosis and treatment particularly in so-called inoperable cases, but no surgeon should feel justified in falling back on these when he can himself obtain a real cure and diagnosis. Unless the surgeon does a good job the patient is perhaps better off even in the absence of a precise diagnosis.

Like the brilliant results of radiology in bone tumors are those obtained in lymphosarcoma, Hodgkin's disease, and leukemia, either diagnostically or therapeutically, or both. The recent article by Stone and Craver,[1] embracing one thousand cases, is particularly a condemnation of biopsy and a glorification of x-ray, not only for treatment, but also for final diagnosis. They call attention to the futility of biopsy, the danger of causing increased growth, increased resistance to x-ray treatment, and even the possibility of subsequent fatal hemorrhage, though they kindly do not refer to the danger of metastases.

At the otherwise excellent cancer meeting in Philadelphia last year the degrading question, "Now should we or should we not do biopsies?" was forced upon the several speakers who advised dispensing with biopsy! Their answer was unsatisfactory because they had expediency only for an excuse and were forced by their own convictions to admit that they had nothing against biopsy and that it furthered statistics. Some were dealing with mere superficial lesions, such as leukoplakia, and emphasized fairly enough the skill in diagnosis, without biopsy, of the expert. In addition biopsy required the loss of ten days to two weeks before initiating x-ray or radium treatment and it might disseminate the lesion. No mention was made of those less expert and the danger of false cures.

While it is at times necessary to withhold a precise diagnosis of the exact type of tumor, and again whether a lesion is precancerous or cancerous, the diagnosis by biopsy, if not by frozen section, can be made in a few hours or a day if necessary. Further sections and staining may be necessary to decide between a fully malignant and a precancerous growth but if the plan next to be recommended is adopted nothing will be lost.

If the rule is established to completely excise all tumors, no matter what their nature may be, provided such readily diagnosable swellings as chancre of lip, etc., are excluded, little fear need be felt of the dangers of either the surgical removal, excluding technical details, or the lack of positive diagnosis by the pathologist, also excluding technical details. All surgeons would do well to classify their tumors for biopsy as they do for surgical operation, namely, operable and inoperable. All operable tumors should be completely removed in one mass with sufficient surrounding uninvolved tissue to exclude all doubt. Such a tumor can be thoroughly examined and all kinds of radial and other sections made of the borders so that if it does prove to be malignant the surgeon will know without waiting for recurrence, how successful the attempt at complete removal really was. Surrounding lymph nodes should be included en masse if possible.

In the inoperable tumors, if we fear dissemination by biopsy section and wish to use x-ray or radium, it should be realized that malignant tumors of this class have already metastasized, at least to immediately surrounding parts, and that movement of the part or the palpation of examination has in such cases doubtless liberated some cells perhaps into the lymph or bloodstream. If we grant that in limb tumors the best procedure is x-ray diagnosis and x-ray therapy because of the loss of a limb by amputation in such locally inoperable cases, it must, nevertheless, be admitted that amputation will always remain the best treatment and biopsy or microscopic examination the conclusive diagnosis.

Biopsy for operable tumors should mean extirpation; for inoperable tumors, simple excision of either the whole or part of the growth. If, for some reason, a huge, bulging tumor cannot be excised and a biopsy is decided upon, the excision of a piece for biopsy should be deep on a side far removed from the surface incision. This may permit the skin incision to heal before infection, hemorrhage, or secondary invasion can take place. Pathologists, sometimes, like surgeons, grow skeptical of the value of frozen

*Read before the General Meeting of the Medical Society of the State of Pennsylvania, Erie Session, October 2, 1929.

†Natural-color lantern slides were used to illustrate this paper.

section and biopsies in general, forgetting the natural limitations in all things and perhaps becoming too idealistic in their expectation. It is essential, of course, that the two work together and that the pathologist receive with the specimen and history, a careful operative note for orientation.

Prevention of cancer is always better than early diagnosis, save that at present we do not know when we are preventing, especially if we ignore early diagnosis. Sometimes at autopsy it is impossible to state where the primary growth began in a generalized carcinomatosis. The very fact that some despair of early diagnosis as a means of control of cancer emphasizes the importance of its greater development. Theoretically, prevention of cancer can be overdone.

Early signs and symptoms of cancer are necessarily local in character and one may sum up in a general way by stating that any lesion demands not only macroscopic, but also microscopic, examination in the manner indicated.

CASE 1. H. R., a man, aged thirty-three, had terrible neuritislike pains in the right arm, for a year or more, diagnosed neuritis until x-ray pictures showed the bones of the arm, and later the forearm, hand, and fingers, riddled with holes thought to be abscesses of osteomyelitis. A small lump discovered on the back of the forearm was excised and proved to be rhabdomyosarcoma. Some years before, he had a loud systolic murmur and had been treated for heart disease, but there were no present cardiac symptoms. This caused speculation on the possibility of a shower of emboli to the arm and even metastatic congenital rhabdomyosarcoma.

In the eight months required to persuade the surgeon to amputate the shoulder, several ribs and the clavicle on the same side became involved. The patient was frantic with worry, pain, and begged for amputation. He finally developed cardiac decompensation from which, however, he recovered before operation. The site of the operation healed perfectly and it was hoped that eventually the ribs affected would also be resected, but the heart finally caused his death. Autopsy showed a severe mitral stenosis but no further tumor masses were seen anywhere save in the ribs mentioned.[2]

CASE 2. A. U., a man aged forty-seven, had a pea-sized, painless nodule on the buttock for years. After repeated removal, this nodule finally ulcerated. The patient died after suffering from a severe hemorrhage from the lesion. Only after fifteen years was the diagnosis of rhabdomyosarcoma established by biopsy, in spite of repeated so-called excisions. Relatively wide surgical excision, after fifteen years, of the ulcerated area and gluteal muscle, followed by two years of x-ray treatment, proved to be too late. At autopsy, metastases in the lungs and very deep, sloughing ulceration of the buttock with invasion of the pelvis, were the causes of death. The real cause of death was probably repeated incomplete surgical removal.[3]

CASE 3. A. F., a woman, age fifty-seven, had a small tumor of 20 years' duration excised from the shoulder. The tumor recurred and was again excised, three or four years later. At this time it was examined microscopically and diagnosed as rhabdomyosarcoma. The surgeon, because of the recurrence, made a determined effort at complete eradication and the tumor did not appear to be rapidly growing. Within a year, however, it recurred, and this time what appeared to be a thorough removal was performed at our hospital. Nevertheless, the woman returned in a few months with large secondary growths in the axillæ with hemorrhage, and curiously those of the opposite side presented very hard, carcinomalike, gross features, causing the surgeon to diagnose cancer of this axilla, possibly arising from a supernumerary breast. Unrelated, multiple, primary cancers are not extremely rare, and without the microscopic examination to prove the lesions identical, save that the harder one had a much greater amount of stroma, it would have been impossible to establish the identity.

These three cases emphasize (1) the absolute necessity of microscopic examination; (2) initial thorough removal; and (3) that sarcomas do not always kill within a very short time but may last for many years.

CASE 4. E. M., a negress, aged 31, for about a year had symptoms in the abdomen, with a history of the appearance of blood in the stool at one time. The diagnosis made was cancer of the liver. An exploratory operation showed an enormous liver occupied by large growths. Microscopic examination showed leiomyosarcoma, and autopsy revealed a relatively small primary growth at the cardia of the stomach. This case is contrasted with the preceding three because it is the homologue of them in smooth or unstriped muscle, and also was probably of much longer duration than the symptoms indicated.

A similar tumor of the breast, and one, recurrent, of the rectum in men have been under observation for three or four years at the hospital.

CASE 5. Mrs. B., aged thirty-seven, had one child. Because of fear of cancer she consulted her physician regarding a possible early cancer of the uterus. He reassured her, after careful examination, that she had no cancer. Within a few months, to the amazement of the doctor, she returned with a large, hopeless cancer of the cervix uteri, which he confirmed this time by excision and microscopic examination. A biopsy in the first place, even if negative, would have eased this physician's mind. This woman died from the cancer.

More important than the biopsy here is the question of prevention rather than early diagnosis. Gynecologists have repeatedly emphasized the absence of early symptoms in cancer of the cervix uteri and some, like Drs. Huggins and Cashman at our hospital, cauterize or amputate chronically inflamed cervices as a routine prevention. Chronic irritation from a previous childbirth, especially a single one, certainly appears to constitute the chief factor. Dr. Cashman has reported on the results of these treatments, which convert the portio vaginalis into a normal-looking structure, and has shown that in not a single instance has cancer developed subsequently. On the other hand he has seen

several cancers in the cervical stumps of supravaginal hysterectomies in which, as a precaution, there was no cauterization of the unremoved cervix.

Case 6. G. J., a woman, aged 49, two years ago had a large portion of the breast removed because of a cyst, and at the same time, a large pseudomucinous cystadenoma of the ovary. A peculiar hyperplasia in the breast, in one small area, resembled cancer; but because of the thorough removal and the absence in other sections, it was not even termed precancerous by the laboratory, but reported as hyperplasia of the breast and chronic cystic mastitis. She returned recently with a small nodule in the thigh below the groin, which resembled an angioma grossly and microscopically, but careful study showed that it was a secondary cancer and the ovarian cyst sections of two years ago showed no signs of malignancy.

Since no local recurrence in the breast could be demonstrated clinically, it must be assumed that, as small as it was, it had already metastasized, or that other similar growths exist in the breast, or that it was not completely excised in the first place. It is well known that breast cancers metastasize at times to the thigh apparently by the lymphatic route, but in our experience bloodstream metastasis, for instance to the brain, is not very rare; and curiously this is true especially in clinically overlooked or ignored tumors of the breasts.

Case 7. D. L., a woman, aged 25, about one year ago had a small mass excised from the breast, with no microscopic examination or preservation of tissue. Beneath the painful small cicatrix (about 1 to 1.5 cm.) a small, hard, adherent growth, in this very young woman, on excision showed microscopically a highly malignant medullary type of cancer. Radical mastectomy with careful pathologic examination showed absence of secondary growths in the breast, muscle, and axillary lymph nodes. One month later another mass had appeared in the opposite breast but the adenofibromatous condition of the amputated breast may indicate that it is a benign adenofibroma, especially since the breasts were both hard and nodular.

What, and how well, did the doctor excise a year ago, and why did he fail to have the growth examined?

Case 8. L. S., a woman, aged 28, only eight days ago had noted pains and a feeling of mass in the breast which showed several small nodules scattered throughout. Amputation revealed that the breast was riddled with cancer nodules and many of the axillary lymph nodes showed secondary cancer. The opposite breast also was removed because of a palpable nodule which showed an adenofibroma with precancerous hyperplasia of the epithelium but no fully malignant growths.

Early diagnosis seemed hopeless in this case but, after all, did she have adenofibromata in the cancerous breast, corresponding to that in the opposite organ, before she developed cancer?

Case 9. Sr. B., aged 26, a woman, with a history of influenza and pneumonia showed, by the x-ray, an atelectasis of the right lower lobe of the lung. A bronchoscopy was done and a bit of tissue was clipped from a small mass protruding into the bronchial lumen. Microscopic examination showed cancer. Several repetitions gave identical results. Bronchoscopic treatment cleared up the atelectasis and the tumor disappeared. Some questioned the microscopic diagnosis, but at the examination made a year later, the mass was twice as large as before and so there is no more doubt. This is early diagnosis, as the x-ray pictures and physical signs could not detect such a small growth, but treatment, other than x-ray, is hopeless because of the great vessels lying immediately beneath.

Case 10. A. G., a man, aged 57, had a mechanical obstruction from the presence of a flat, circumscribed growth of the soft palate. Biopsy, which was requested by the surgeon, proved the latter's undoing. We excised the mass, cured the patient, and diagnosed it papilloma malignum. Here biopsy is synonymous with surgical extirpation and should be so when possible. Pathologists should not perform biopsy excisions.

Case 11. R. P., a woman, aged 35, had the cervix uteri amputated because of the presence of a growth. The growth was a rather circumscribed characteristic adenoma malignum, or adenocarcinoma becoming wild only in a small area, microscopically. Because of its gross and microscopic appearance, it was necessary to make many sections to discover the more aberrant portions.

Case 12. T. G., a man, aged 60, had an ordinary rodent ulcer of the nose. No biopsy was made. At present it has a small, insignificant, crustlike appearance, but it surely will return if not completely excised. Fortunately, however, it is, probably the least of the malignant growths, when small, that demand total extirpation, as recurrences can again be excised if detected early, since it does not metastasize distantly. It is located where one is tempted to be conservative with the result that its remarkable ramifications are left and cause recurrence. It kills by deep penetration and ulceration, and should, therefore, receive the same thorough removal that a benign tumor also demands.

Case 13. W. W., a man, aged 34. For ten years had a small circumscribed keloid-fibroma on the front of the ankle, where the puttee rubbed. It ulcerated, but microscopic examination of the completely removed tumor revealed no malignant change.

Case 14. R. R., a man, aged 44, had an ulcer of the stomach. While it did not appear so sharply defined as a peptic or round ulcer, and had larger, rounder borders, it required a microscopic section to prove that it was cancer. Incidentally the clean excision of the ulcer by the surgeon, although probably fruitless, is highly commendable when possible.

Case 15. S. R., a girl, aged 17, though not married, had a ruptured hymen. She denied having had intercourse. She had missed three menstrual periods. Bleeding from the vagina started and examination showed the source was on the posterior wall of the vagina, midway up, where a small hematoma was discovered. The hematoma was emptied and it was concluded that it was traumatic from attempted instrumental abortion, but in the clot the surgeon noted a small, flaccid cystlike structure. It was a placental villus and at once chorioepithelioma was anticipated, especially because the Langhan's cells showed so much proliferation. The entire area in the vagina was excised and from this the diagnosis of regressive chorio-adenoma halted an otherwise indicated hysterectomy of the enlarged uterus. The patient was almost incarcerated in the hospital for three and one-half months, when she aborted this characteristic hydatidiform mole, and now appears well. The value of interpretation of microscopic sections is emphasized in this case.

CASE 16. F. Y., aged 38, and the mother of six children, had a severe, finally fatal, uterine hemorrhage. Curettings, and later the uterus itself, showed syncytioma or syncytial endometritis. Autopsy, as expected, failed to show any metastases. This case contrasts well with the preceding one and with true chorio-epithelioma or chorio-adenoma.

CASE 17. E. B., a negro, aged 20, had sore throat six months ago, and a second attack later. He developed a mass involving the left tonsil, and also had a hard, large liver. Biopsy of the tonsillar mass showed lymphosarcoma. He died, without autopsy, but we have a biopsy.

CASE 18. F. H., a man, aged 31, had a tooth extracted two weeks ago from the lower jaw. The back teeth were all loose and the gums swollen. He was brought to the hospital in a dying condition. The best diagnosis possible at the time was osteomyelitis. A section of the gum showed lymphosarcoma, and the x-ray, postmortem, showed much bony invasion.

Without the microscopic section, this case would have been recorded as osteomyelitis of the mandible. A previous biopsy at another hospital showed only necrotic tissue.

CASE 19. G. M., a man, aged 51, showed tubercle bacilli in the sputum, and a fissurelike ulcer of the anterior portion of the tongue. A biopsy showed tuberculosis and some tubercle bacilli. Cancer could not be excluded until after a biopsy, and in our opinion complete excision of the ulcer en masse would have done no harm.

CASE 20. C. H., a man, aged 51. The liver of this marked case of portal cirrhosis so resembled cancer that, without microscopic proof, the clinician would have disagreed with the gross diagnosis.

CASE 21. H. O., a man, aged 61, had cancer of the sigmoid flexure with a large secondary cancer of the liver. This case may be contrasted with the preceding.

CASE 22. W. E., a man, aged 47, had a traumatic fracture of the pelvis suspected from hematuria, but the examination showed a large liver which was diagnosed as cirrhosis. Hematuria, however, came from a very large hypernephroma of the right kidney with bulky metastases occluding the renal vein and vena cava and growing up into the heart, with secondary growths in the lungs. It was the large kidney which was primary, and not the large liver.

CASE 23. L. F., a negress, aged 60, had an ulcer on the leg for fifteen years, becoming larger and more painful until it almost encircled the leg. It was diagnosed by a surgeon and confirmed by x-ray pictures, as osteomyelitis of the leg. The biopsy showed it to be an enormous cancer of the leg. This case proves again that it is not only the small lesions which require biopsy for final diagnosis.

CASE 24. A. K., aged 32, and the mother of three children, fell two years ago and hurt the thigh, which swelled and became discolored. It has a large, oval, hard, movable mass the size of a football. It was considered to be a hematoma because of its duration, and a long incision was made to remove it intact. It was shelled superficially, but suddenly the surgeon plugged it, like a watermelon, for biopsy which revealed a soft, encephaloid fibrosarcoma. Then, fortunately, x-ray pictures of the chest showed secondary growths in the lungs, but the woman was returned to her family with an ugly, open, neoplastic ulceration of her thigh which she did not have before. Complete excision or perhaps a piece removed deep on a side might have averted this, at least.

CASE 25. This case illustrates the possible harm of propaganda for early diagnosis (with poor judgment) of cancer, the importance of clinical symptoms, and the absolute necessity of biopsy.

On final examination, a week or two after a hemorrhoidectomy in a middle-aged man, the surgeon discovered a relatively large mass on one side of the rectum of the patient, who had not complained of symptoms. Being certain that the mass could be nothing but a cancer, and also that it was early in spite of its size and lack of symptoms, the surgeon excised this man's rectum quite successfully in his ambition to remove the mass completely and cure the cancer. On section, many cystic cavities filled with an amber-colored, semisolid jelly, quite like colloid material, surrounded by dense fibrous tissue were seen to constitute the tumor and, save that the cavities were somewhat large, it closely resembled a colloid cancer of the rectum. There was no ulceration of the mucosa, though it was convoluted like a cancer, and the patient had no obstructive symptoms. The surgeon proved the jelly was soluble in fat solvents and the microscopic sections showed this and the characteristic structure of a foreign-body granuloma.

This surgeon still thought he did the proper thing for the patient, and never even thought of biopsy. When this was mentioned he said that his chief never taught him to do biopsies! The paraffinoma was, of course, produced by the surgeon himself during the hemorrhoidectomy, by injection of vaselin, and now the patient has a permanent colostomy and no rectum!

SUMMARY

1. Final diagnosis of tumors is possible only with the microscopic section.

2. Poor judgment in making a biopsy, either during the surgical procedure or in the subsequent laboratory diagnostic methods, does not condemn this substitute for autopsy.

3. Biopsies must be made with much forethought, and in operable cases should consist of total removal. In inoperable cases most of the tumor should be removed, or at least a piece taken from the deeper side of the growth to secure surface closure.

4. Too much has been written regarding dissemination of the growth by clinical examination and surgical preparation; normal molestations and physiologic movements are overlooked.

5. Incomplete removal of any tumor, unless inoperable, is never justified, because it cannot be hoped that even a benign tumor will regress it not totally removed, and it might become malignant.

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ABSTRACT OF DISCUSSION

Bender Z. Cashman, M.D. (Pittsburgh, Pa.): The important factor in the control of cancer is early and accurate diagnosis, which means more than the history and gross examination. The history is of little value in the early diagnosis of cancer, for early cancer gives no symptoms. Bleeding, which is the common so-called early symptom of cancer, does not occur until the cancer progresses sufficiently far to ulcerate. In carcinoma of the cervix uteri, bleeding often does not occur until the cancer is inoperable. We have had three cases in which there was no bleeding at any time, and the patient consulted me for a foul discharge, which is a late symptom. In carcinoma of the breast the lump is found accidentally, not because of pain or symptoms. Dr. Lewis said that cancer of the stomach may be advanced before symptoms are noticed. This absence of symptoms in early carcinoma is one of the best reasons for periodic physical examinations. The more the microscope is necessary for diagnosis the more hopeful the outlook for the patient.

In doing a biopsy, the excision of the whole area is the procedure of choice. If that is not practical, removal of a piece for examination is justified. The objection is raised that the removal of a piece of tissue disseminates cancer, but in a suspicious lesion a definite diagnosis is so essential that we feel we are justfied in removing a piece for examination, provided we are prepared to carry through radical treatment. Delay in treatment after biopsy is not justified. Biopsy is not an infallible procedure. There should be good technic in removing the specimens and experience and judgment in interpreting them. The treatment of suspicious lesions without using every means for making a definite diagnosis is a step backwards and is responsible for some of the optimistic reports on the treatment of cancer by various methods.

Curtis C. Mechling, M.D. (Pittsburgh, Pa.): There has been a lack of general acceptance of biopsy among the rectal surgeons of my acquaintance, of course because of fear of dissemination. I disagree with their contention. Surely massage and friction produced by normal defecation would be more likely to cause dissemination of malignant growth in the rectum than a correctly done biopsy. This massage is even more marked when the patient is constipated.

Most rectal tumors are carcinomata. Carcinomata, when brought to the surgeon are usually so advanced that diagnosis is easy. Early cases are not seen and consequently there is no occasion to use biopsy. Not all rectal tumors are carcinomata. There are round-cell sarcoma and melanosarcoma, and in two years I have seen two cases which on biopsy proved to be leiomyomata, a rare rectal tumor. A diagnosis of malignant disease is not enough. If the grade of the malignancy could be determined, like the degree of the Wassermann reaction, the reports would be more helpful.

John B. Deaver, M.D. (Philadelphia, Pa.): In early cancer, Dr. Lewis says he must have more coöperation between the doctor and the surgeon. The doctor, unfortunately, holds a position that is peculiar. The patient sees the doctor first, then the surgeon, and last the undertaker. We must reverse this—the surgeon and the doctor should see the patient, and then the undertaker would not have the case as often as he does. The early diagnosis of cancer of the stomach, or of any part of the body, is largely a surgical problem. Those who make thousands of autopsies in vivo, or see them made, have a better idea of disease, other things being equal, than the medical man who has not had this opportunity.

So far as carcinoma of the stomach is concerned, Dean Lewis is right, it is frequently the result of dyspepsia. We have proved in the Lankenau Hospital, where we have one of the best research laboratories of the country, and where the specimens removed by the surgeon are very carefully examined, not only grossly but from the tissue standpoint, thirty-five per cent of gastric carcinoma develops from ulcers. The medical man, therefore, should send it to the surgeon and there will be less carcinoma. I agree with Dr. Lewis that it is a difficult problem, and I believe the x-ray, next to incision, palpation, and inspection, is the most reliable means of making an early diagnosis. Our roentgenologists must do finer work. They must detect more than craters, for when you have a crater, the disease is far advanced. I place very little reliance upon the ordinary x-ray plate, no matter who took it.

THE PHYSICIAN AND MENTAL HYGIENE*

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Mental hygiene is preventive medicine applied to mental disease. It aims to promote mental health and to prevent mental disorder and defect. Its object is to reduce to a minimum the number of mentally ill, feeble-minded, and epileptic filling our public and private hospitals and to decrease the great army of psychoneurotics. It stands for early recognition and rational treatment along sound, practical, medical lines.

Mental hygiene began largely as a preaching and propaganda movement to stimulate an active interest in the physical environment and proper care of the mentally ill in institutions. In this it has in a great measure succeeded. Today there is a general awareness of the fact that we do have mental hospitals; that we have under public and private care in this country an army of mentally ill, feeble-minded, and epileptic who occupy as many beds as do all other classes of patients put together (including cancer and tuberculous); and finally that these individuals should be and are treated medically and humanely in the proper type of buildings by a well-trained, high-type medical and nursing personnel.

In recent years, mental hygiene has safely launched the child-guidance clinic movement, to the end that many cities have now established permanent clinics, either independent or in connection with hospitals, schools, or juvenile courts. It has convinced physicians, psychologists, social

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workers, educators, and parents of the effectiveness of the objective approach to these behavior problems. It has emphasized the careful and thorough study of the child and its environment. It has focused the attention of these groups upon the pre-school and school periods as the golden period of mental hygiene, before the youth has become deeply incrusted with pathologic habits of mind and body.

Mental hygiene has later concerned itself with those broad fields which concern the so-called normal adult. It has entered the college, industry, business, home, and church. It comes to you over the radio, through the newspaper, magazine, novels, and books. It has pervaded every walk of life. Every thinking individual knows something about it. Mental hygiene has come to stay and it has a place in every well-rounded program of preventive medicine and public health.

The immediate future of mental hygiene lies emphatically in sound clinical practice and research. We have a plethora of facts and a paucity of understanding. There has been much successful educational publicity through effective organization. There has been considerable clinical observation by competent workers. This should continue, but we should also have careful analysis and research by investigators, trained and skilled in the basic sciences involved. We need a wider clinical application, more well-trained personnel, and far more research.

To make sound progress along rational, scientific lines, mental hygiene must remain in the hands of the medical profession. There are a few signs indicative of danger of the movement passing, at least in part, into the hands of others. We have psychologic, habit, and vocational guidance, social guidance and educational clinics, all doing or trying to help in adjusting the misfit to his environment, each emphasizing some particular approach to the problem. We have persons without medical training who call themselves psychiatrists.

Medicine will dominate in mental hygiene in direct proportion to the contributions of liberal-minded medical men in research, and the interest and understanding of mental medicine exhibited by the bulk of physicians in practice. The practitioner is the real crux of the situation, as he is the central figure in any successful public health movement. To him patients and the public look for their cues in matters of preventive medicine. He can give a great impetus to the movement by a sympathetic attitude; he can seriously retard its progress by ridicule and ignorance of its objectives. It is not expected that every physician be especially qualified or interested in mental and nervous diseases. It is, however, essential that he have certain constructive attitudes toward the mental-hygiene movement and that he have a certain fundamental knowledge and understanding of its principles and of the magnitude of the problem.

Statisticians in the United States estimate that four per cent of all children in school attendance will become patients in mental hospitals sooner or later unless mental-hygiene precautions are taken. One out of every twenty-five persons born will eventually suffer a mental disorder. In every seventh family in the United States there is an individual with mental illness. From ten to twenty-one cents of every dollar collected by each state for taxation goes to the maintenance of public institutions for the mentally ill. These figures refer only to the institutional aspects of mental disease, the developed case, so to speak.

While it is true that mental disease and defect do not play a major rôle in the death rate, yet considering the misery, the disability, and the burden placed upon society, it is probable that disorders of the mental system outweigh in significance disabilities of all other organs of the body taken together. It is commonly said by nurses and social workers that in the average family, the burden of mental ills is equal in magnitude to all others.

The problem of the mentally disordered is decidedly the problem of every physician. He cannot escape it whatever be his field of preference. Every case of physical illness has some mental aspect to it. Sooner or later the practitioner encounters a mental situation in one of his patients and he must cope with it. In his office and in the dispensaries of general hospitals are countless men and women whose ailments, given physical expression perhaps, are, nevertheless, in large measure due to fears, worries, disappointments, unsatisfied cravings, shocks, fatigue, and the like. Their happiness and their business and social efficiency are usually much impaired. If they fail to receive early treatment, many of them will later enter mental disease hospitals.

The problem of directing towards health these potential victims of mental disorder lies both in the difficulty of identifying them at the time when preventive and early therapeutic measures can be applied with greatest chances of success and in the practical application of such alleviating measures. The solution lies in the education of the public to a sound, constructive attitude toward mental disorder—its nature, treatment,

and outlook—, to an understanding of the immediate practical objectives of the mental-hygiene movement in the community and state; and in a full appreciation by physicians, nurses, and social workers of this educational program and more particularly of the meaning of mental symptoms and of the rational prophylactic and therapeutic approach to the clinical problem.

Mental disease must be frankly recognized as a disease due to one or more causes, syphilis, alcohol, infections, fatigue, malnutrition, faulty mode of living or environment, mental shock, or other tangible, etiologic factors. It is to be robbed of all suggestions of guilt and embarrassment and divested of its shroud of mystery, fear, and misconception.

Mental symptoms are to be regarded as signs of a disordered physiology, calling for a thorough physical, mental, and laboratory examination and an exhaustive search for physical, chemical, and psychic factors. The usual careful history and investigation of the patient's living conditions, home, work, economic condition, and general environment, will in all cases throw additional light upon the situation. Diagnosis is based upon an analysis and weighing of all these factors. Treatment consists of dealing in the usual way with the physical and chemical factors, and of adjusting the individual to his original, or to a modified, environment. It truly means treating not only the disease, but also the patient as a whole individual, and often his family, too.

The term "insanity" has been much misused and abused. Lay people use it loosely to describe an incurable, hopeless, mysterious condition of the mind made manifest by queer, violent, noisy, and unreasonable behavior. As a matter of fact, in medicine "insanity" has no reference to any single, mental disease. Janet says it is a police term, not a medical one. Truly it is a social and legal term used properly to designate that relatively limited number of conditions in which the individual is so disordered or disturbed mentally that he is likely to be a menace to himself or to others for which reason legal measures are necessary for the protection of the patient and of the community. It is, therefore, desirable that the use of this term be restricted to its legal meaning, divested of all the etiologic, prognostic, and symptomatic connotations usually associated with it.

Mental disease is not to be regarded as a hopeless proposition. As a matter of fact, mental hospitals, in which the great majority of cases are late and fairly well developed, return about twenty-five per cent of all patients to society, recovered and with a return to full function; and another fifteen per cent, improved. These results probably compare rather favorably with the experience of general hospitals. It is not too much to predict that some day the misery, burden, and loss caused by mental disorder is destined to be cut in half by the early and timely application, particularly in childhood and adolescence, of knowledge already available. Hope inspires action and a popular impression of optimism regarding mental disease will go far to bring the mental patient earlier to the physician.

Every practitioner is at one time or another confronted with the problem of the temporary care of a mentally disturbed patient pending hospitalization. The pernicious practice of using jail cells for the holding of these patients awaiting commitment is too prevalent. To incarcerate a person sick in mind in a station house or in a hotel room, under police supervision, only serves to encourage and fix delusions, to aggravate the illness, and to promote violence. The mentally-ill individual should be treated as a sick person and not as a public menace. Publicity should be avoided. Separate psychopathic wards or rooms should be provided in local city or private hospitals for the emergency care of this type of patient, or at least a clean, quiet, safe room should be available where proper medical attention, first aid, and intelligent nursing can be given the mentally injured and no more stigma or disturbance ensue than in the treatment of a case of appendicitis or fractured skull.

Education and enlightenment must always precede action by government bodies, municipal, county, or state. Executive departments are conservative and slow to recommend increased expenditures for expansion or for new lines of work unless convinced that the suggestions are tried and sound and will meet with popular approval. Legislative bodies will not make appropriations for anything beyond the bare necessities for the mentally ill, feeble-minded, epileptic, and delinquent, unless urgently pressed and forced to do so by repeated and solid public demand. Experience in the recent campaign for a fifty-million-dollar-bond issue for our State welfare institutions teaches us that success in increased appropriations results from the wide and repeated dissemination of sound information which in time enlightens and alters public opinion and in the end results in appropriate legislative and executive action for more adequate and general facilities, for while the welfare-bond-issue amendment did not pass, 448,727 votes were cast in its favor and the legislature appropriated more than ten million dollars for these institutions for the current biennium. The campaign

for further enlightenment of our judicial, executive, and legislative bodies in the handling of the mentally ill, feeble-minded, epileptic, delinquent, and penal offender and in providing adequately for their care must go on.

Juvenile offenders should be spared as much as possible the atmosphere and stigma of the criminal or even of the juvenile court. They should be examined in clinics which permit easy access and egress, shielded and protected from public scrutiny and notoriety. Juvenile courts should be encouraged to rely more and more upon thorough medical and psychiatric examinations.

Penal institutions should rely more and more upon psychiatrists for the mental examination of prisoners. The psychiatrists must more fully dominate criminal procedure—perhaps even to the suggestion by former Governor Alfred E. Smith, of New York, that the courts should pass merely upon the fact of the commission of a crime, leaving the prescription of treatment and after care of the offender to a group of medical experts.

Complete care of the mentally ill by the state is an important objective in Pennsylvania. It should be gradually accomplished on an equitable arrangement with the counties now maintaining public mental hospitals of their own.

The newly opened Selinsgrove State Colony for Epileptics should be developed to full capacity as rapidly as possible.

The new Cumberland Valley Institution for Defective Male Delinquents, upon which construction is now under way, should be completed as soon as possible.

The State Bureau of Mental Health and the State mental hospitals and schools for the feeble-minded should be encouraged in their excellent work of conducting the State mental-health clinics (approximately sixty) now in operation and in carrying out comprehensive programs of community mental hygiene.

We have an urgent and immediate need for two State psychiatric hospitals in Pennsylvania, one in Pittsburgh and one in Philadelphia. A psychiatric hospital, or psychopathic hospital as it is sometimes called, is an institution for research and diagnosis in the field of nervous and mental diseases and defect, for the treatment of border-line, early, and curable cases of mental disease, for the dissemination of knowledge relating to the prevention of mental illness and for the special training of medical and nursing personnel in the principles of psychiatry and mental hygiene. The psychiatric hospital should play an important rôle in promoting mental hygiene programs in schools, courts, public institutions and agencies, in coördinating their activities and in making their programs more effective. The psychiatric hospital should constitute the keystone of the State's organization for the prevention of abnormal mental conditions.

Mental hygiene is needed to help millions of people to think right, act right, and feel right.

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ABSTRACT OF DISCUSSION

H. W. MITCHELL, M.D. (Warren, Pa.): In recent years, psychiatry has begun to enlist the attention of physicians and the public to a degree comparable with other medical specialities. In all circles there is an increasing conviction that disorders of the mind cannot be considered apart from physical disturbances, and there is no sure approach to a better knowledge of mental disturbances that does not employ all known medical means in diagnosis and treatment of the individual as a whole. This conception of the relation between mental and physical disturbance has found its best expression in the developments at Saint Elizabeth's Hospital, where the government sends its cases of mental illness. No other hospital in the United States approaches this one in the conception of its duties to the public and its preparations for fulfillment. Here, as a first step towards meeting the psychiatric problem, is every facility found in any well-regulated, general hospital for the complete physical study of the individual patient: appropriate buildings; adequate medical and nursing staff; clinical laboratories that furnish every necessary aid in the diagnosis of physical disorders; a hospital building with medical and surgical service to which all patients and those requiring observation are sent for appropriate medical and surgical care, given under the supervision of a competent internist or surgeon, as may be required. Physicians in this department have no responsibility for the psychiatric study which is conducted by others. Clinics covering the various fields of medicine are held in this department and are attended by the leading specialists of Washington. Several dental units are constantly in operation; advantage is taken to employ all recognized forms of diagnosis and therapy among the mental cases needing such treatment. Research in chemistry, pathology, and histology is given its full place by the management in recognition of the part that medicine plays at this hospital. To such an equipment, if we add teaching instruction for students, postgraduate work, and laboratory organization for original research, we have the complete psychopathic hospital developed in a few of our teaching centers, where they flourish best in coöperation with medical school development and correlation with all other branches of medical instruction. The ideal pattern for a state hospital service must have all the other facilities, barring teaching and original research, before we can feel that men and women with acute mental disturbance are receiving the type of treatment which we should desire for members of our own families. The state hospital has an opportunity for public service that from the standpoint of prevention is of utmost importance; it can offer its facilities for voluntary admissions, diagnosis, and report to the family physician; it can operate clinics to which patients can be sent by any charitable agency or by recognized physicians, where its function is comparable

to that of first-aid to the injured. It can coöperate with school authorities in the helpful and interesting work of estimating the capacity of backward children and in giving advice at a time in life when it is most needed.

The recent spread of the mental hygiene idea, largely due to the initiative of Clifford Beers, has developed beyond his original conception of improving conditions in hospitals to a much broader field. Its activities range from controlling and originating legislative programs in many states to institutional development, as Saint Elizabeth's. The mental hygiene effort has been recognized by our schools and institutions of learning and plays an important part in the supervision of children from the public schools to the universities where painstaking efforts are made to teach young Americans to think sanely and wisely, and to correct, as far as correction is possible, contrary tendencies. Workers in mental hygiene should recognize that they are custodians of mental health, even as the public health officials hold a similar capacity in controlling disease. If the task of mental hygiene is more difficult and more uncertain than the other, it should merely inspire to greater effort and arouse the interest of all persons who feel that the function of the mind is as important in an integrated personality as that of any other organ.

Theodore Diller, M.D. (Pittsburgh, Pa.): Many of you have the impression that the subject of mental disease is dull, uninteresting, and repulsive. On the contrary, it is one which is full of romance and which may fascinate us by the great men and women who have been leaders in this specialty. Let me mention a few of them.

In 1793, while the French Revolution was at its height, a young medical man, Philip Pinel, was placed in charge of the Bicêtre, an old hospital in Paris. Here he found patients chained to doors and posts; he removed their shackles. His action attracted the attention of a noble family of Quakers, the Tukes, living near York, England, who promulgated Pinel's doctrine in England. Besides this, in the second and third generations, great leaders were contributed to the campaign for humane treatment of the insane. They carried their doctrine across the Atlantic Ocean and founded the Friend's Asylum and the Pennsylvania Hospital for the Insane, both in Philadelphia.

The Philadelphia Quakers were assisted by a Frenchman from Bordeaux, Stephen Girard. Stephen Girard's wife was insane and kept on the roof of the Pennsylvania Hospital for several years and then it seemed wise that she should be removed to a separate building; and Girard, coöperating with the good Quakers, assisted in building a separate building in West Philadelphia, which continues to function to this day.

Some few years later came our bright and shining angel, Dorothea Dix, who went up and down the land preaching the gospel of humane and better care for the insane, to their immense benefit. Indeed she crossed the ocean and carried her doctrine to several foreign lands. Our own institution at Dixmont is a local monument to this marvelous woman.

The battle for humane care for the insane was won. Now a great danger presented itself—those engaged in the care and treatment of the insane might rest and be satisfied with the great victory won, the rescue of the insane from cruelty and abuse and procuring humane care for them. Many years ago, Dr. S. Weir Mitchell sounded the alarm which spread over this whole country and called for more modern treatment for the insane—medical and surgical treatment which should be like that given other sick persons. This movement has been going on now for forty years, not so rapidly as we should like, but of late it has been gaining momentum and everywhere we find able and progressive men who are placing their institutions on a hospital basis and employing more modern methods in the medical treatment of the insane. The foundation of the Society of Mental Hygiene by Clifford Beers has aroused interest in the prevention of insanity. In this State Society, those of us working in the field of mental disease receive greater encouragement than ever before. The truth seems to be grasped that mental illness is a matter of concern for all physicians and of vital concern for the general public. I am sure I voice the feeling of all workers in mental disease when I say we are greatly heartened and encouraged by the coöperation and interest in the matter of mental illness which has been shown by the State Society.

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*Symposium on Diseases of the Testicle**

EPIDIDYMITIS

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An interesting and significant advance in medicine for the period covering this first quarter of the century is that concerned with the subject and condition of epididymitis. Even so late as twenty-five years ago, but two types of epididymitis, were recognized, the acute and the chronic. The acute type was always considered as gonorrheal in character; the chronic, as tuberculous. The whole matter was thus simply disposed of within the more or less recent memory of most of us. Berman, in 1905, was the first to demonstrate gonococci in acute lesions,[1] and since then various tissue changes and various organisms have been described by many investigators. Without going into the historical details of these reports, it may be stated that, although the gonococcus is the organism overwhelmingly causative, the condition may be due to the bacilli of tuberculosis, staphylococci, or colon bacilli, and that the acute and chronic types of gonorrheal epididymitis are of the same genus as are the acute and chronic forms of the tuberculous or the syphilitic varieties.

In a recent study of 3,606 cases of epididymitis, admitted to the urologic service of Bellevue Hospital, it was found, that, while 3,000 of these resulted from gonococcus infection, 280 were due to the tubercle bacillus, and the remainder to those commonly designated as nonspecific. The nonspecific are more properly designated as nongonorrheal, nontuberculous, since staphylococci, colon bacilli, and, more rare-

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ly, micrococci catarrhalis may be identified with epididymitis, either individually or in combination.[1]

The types of epididymitis recognized today, therefore, are the tuberculous, acute and chronic; the gonorrheal, acute and chronic; the syphilitic and nonspecific or nongonorrheal, nontuberculous.

Of the acute type of tuberculous epididymitis, it may be said, that it is far more important than believed. In any series of cases, it will be found that at least twenty-five per cent of them have begun with a period as acute as that of gonorrheal epididymitis, or that caused by the colon bacilli, or by staphylococci, yet often we forget that tuberculosis may produce acute epididymitis, and pay little attention to it, but employ such treatment as is indicated for gonorrheal epididymitis, which may be very inappropriate. Thus much time is lost and a testicle may be involved by the tuberculous process. In most cases of acute tuberculous epididymitis, there will be associated tuberculosis of bladder, kidney, prostate, seminal vesicles, lungs, or joints.

Much more interesting than the acute, is the pathology of the chronic type, particularly in the chronic epididymitis, in which there is no infection of the urinary tract. If there is infiltration in the epididymis, and tuberculosis outside the genito-urinary tract, it will be assumed, that the case is one of primary tuberculous epididymitis, and the epididymis should be removed. In most of these cases, it will be found, after removal, that the epididymis is tuberculous; the pathologist will report that he has found in the epididymis, specific tissue changes, tubercles, giant cells, and caseation. In many other cases, however, the pathologist will report, that the epididymis shows no signs of tuberculosis, but only nonspecific inflammation. In this connection it will be recalled, that tuberculosis does not always produce specific changes. When chronic tuberculous epididymitis with nodules in the prostate and vesicles is found, it is usually agreed that the best thing to do is to remove the epididymis before the testes become infected.

When infiltration in the epididymis only is found, there should be a little delay to ascertain whether or not the epididymitis will regress under ordinary treatment. If it does not regress quickly, the patient should be told that the condition is tuberculous and, even if it is not, healing will be more rapid and he will lose less time by surgical treatment. This is true because, in the chronic type, it will be found that abscesses have formed, the caniculæ are obstructed, and the passage of spermatozoa is inhibited. In ninety per cent of the cases there will never again be passage of spermatozoa.[2]

Epididymectomy can be done safely under local anesthesia, and only three days in bed are required. The wound will be healed in six or seven days. The patient does not lose by this intervention which has the advantage, if tuberculosis is present, of healing quickly and of saving the testes. The reports of marvelous healing in these cases by x-ray treatment or tuberculin, in a few months or years, may have been cases not of tuberculous epididymitis, but cases of chronic nontuberculous epididymitis, a disease not yet universally known, and a distinction not universally recognized.[2]

The radical operation for tuberculous epididymitis, removes epididymis, testicles (when involved), vas, prostate, and seminal vesicles. The entire genital tract may be removed, with a mortality of four per cent in the hands of Young, who is an ardent advocate of the method. Although Whiteside, Quimby, and a few others share his view, many are inclined to agree with Dellinger Barney who declares that, no matter how radical the operation, it cannot remove the focus in lung or bronchial lymph gland from which the genital process took its origin; nor can it prevent the subsequent lighting up of this focus with the production of general miliary tuberculosis.

A passing glance at the literature of the day would seem to indicate that epididymitis and orchitis are practically identical diseases in the popular, and sometimes the professional mind, for the reason, that both involve the testis, and the results in the one case are likely to be identical with those in the other—the principal item being the fear that testicular atrophy will be a permanent effect, by whatever name it is designated.[3] Now, whereas orchitis may be unilateral or bilateral, epididymitis is usually only unilateral. When both epididymi are involved, one of them is apt to become affected from three to nine days later than the other, rather than simultaneously. Epididymitis and orchitis may often be associated in the same general infection, but usually the epididymitis precedes the orchitis. The general line of treatment is the same for each. A hydrocele often develops with the epididymitis; not infrequently tenderness of the glands on palpation will show that the spermatic cord is involved, also.

The symptoms of the disease in its several varieties are nearly identical; the difference is in the degree of intensity. They are of the inflammatory type—tenderness along the cord,

hard swollen vas deferens, and pain in the back. The epididymis rapidly swells and becomes exceedingly tender, the patient walking with a stooping gait and with the legs wide apart. When the inflammation is at its height, general malaise, anorexia, and fever of 100°F., or over, may be included in the clinical picture. On examination, the tenderness and swelling will be found to be confined to the posterior part of the scrotum. Suppuration is rare, the general tendency being always toward resolution. Traces of the attack often remain for a long time after the inflammation has subsided, the regular outline of the organ being interrupted by masses of lymph. In about sixty per cent of the cases of bilateral epididymitis, the patient remains sterile.[4]

On the basis of clinical symptoms, microscopic diagnosis, and pathologic manifestations, gonorrheal epididymitis may be considered in five stages; the anatomic progression of the infection is from the posterior urethra, prostate, and seminal vesicles down the vas deferens, so that in the first stage the patient complains of pain in the groin and along the course of the vas deferens, together with general malaise. A vasitis is present and the decending infection will soon involve the epididymis. In the next stage, the infection will have reached the epididymis and there is tenderness and swelling along the vas deferens. In the third stage, there is considerable enlargement of the epididymis and all symptoms are accentuated. In the fourth stage, the epididymis is enormously enlarged, with accompanying orchitis; hydrocele makes its appearance; there is fever and marked leukocytosis; the patient is toxic and suffers greatly. The fifth is the convalescent stage. In the treatment of gonorrheal epididymitis, the treatment of the acute anterior urethritis is very important and we should strive to reduce the incidence of posterior involvement to a minimum. My best results, along this line, have been obtained with the method outlined by Pelouse. He reduced the textbook incidence, of forty to ninety per cent of posterior involvement, to fifteen per cent in those cases applying for treatment within the first four days of the infection.[7]

The less treatment that is placed in the patient's hands, the better the results will be. Rough or early manipulations of the prostate, the vesicles, or introduction of instruments into the urethra appear too frequently in the histories of cases of epididymitis.

Treatment should commence with the very first manifestation of symptoms, and should consist of rest in bed, a cathartic and the testes immoblized with a splint. An ice pack or hot water bottle applied to the inflamed parts will give comfort. The scrotal splinting is best obtained with an adhesive suspensory. Many of the cases regress under this treatment.

In a report of two hundred and fifteen cases of epididymitis, treated in the Providence (R. I.) Hospital, "expectant treatment" only was given in one hundred and forty-five cases. This consisted of rest in bed, support of the scrotum, local application of ice and twenty per cent ichthyol, and alkalies by mouth. Proper diet, sedatives, and laxatives were given as indicated.

As reported, "expectant treatment" gave uniformly poor results in so far as relief of pain was concerned. Of those treated, it was necessary to perform epididymotomy later in fifty-one of those cases; twenty-five more of them had to have other forms of treatment after the failure of the "expectant treatment." Eight of the patients in that series, received injections of aolan into the gluteal muscles, in addition to the "expectant" routine and were followed up until the termination of the disease; all did fairly well. Calcium chlorid, sodium iodid, and other intravenous medications have been spoken of very highly as adjuvants by some authors.

I have had some good results from aolan (intradermally) and diathermy in office patients who would not go to bed. Where the epididymitis does not regress and where the pain does not disappear within forty-eight hours, the case is a surgical one. Pain is a better guide than is elevation of temperature as an indication of operation, since patients may have sufficient pain to keep them awake at night, who are totally afebrile. When the epididymis has been exposed in these cases, gross evidence of abscess formation has been revealed. Other indications are abscess demonstrable by fluctuation, and in chronic cases, the presence of an indurated, thickened, and tender epididymis.

Epididymotomy by the method of Hagner is the procedure of choice.

Cunningham and Cook described epididymotomy as: "A rational procedure of active acute and recurrent acute and subacute epididymitis, being the application of the general surgical principles of drainage to an inflamed structure, with the same beneficial results as in other structure."[8]

The advantages claimed for epididymotomy are: shortening of the disability period, complete relief from pain and toxemia, the destruction of healthy tissue is reduced to a minimum, and the spread of the infection is limited.

In my series of fifty-two epididymotomies, over a period of nine years, there was immediate

relief from pain. Many of these were neglected cases, and I feel confident that the disability period was shortened, when compared with similar cases in which an operation is refused.

Coöperation between the family physician and the urologist is essential for the proper treatment of epididymitis.

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CHARACTERISTICS OF CYSTIC TUMORS OF THE TESTICLE

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Cystic tumors have certain diagnostic signs that are common to all and should not offer any great obstacle to a correct diagnosis, but there are enough individual symptoms to warrant a detailed description.

Hydrocele is an abnormal increase of fluid within the tunica vaginalis. There are some variations from this in which the fluid is outside the tunica vaginalis.

The condition may be acute or chronic. The acute form is usually the result of trauma or the extension of inflammation from the testicle or epididymis. The symptoms are secondary to the inflammatory condition of the testicle or epididymis and will depend upon the severity of the same. There may or may not be pain. Usually there is tenderness, and the sac will be increased in size. The diagnosis is easily made from the history, swelling, and light test.

Prognosis will depend upon the subsidence of the primary inflammation, but the rule is resolution and absorption. If the swelling remains after several weeks, the condition becomes chronic.

The cause should receive our first thought; then the treatment, which should consist of rest in bed, elevation of the scrotum, use of evaporating lotions, puncture or incision for relief of great pain, and drainage if suppuration takes place. Treatment is usually palliative.

Chronic hydrocele is a persistence of an increase of fluid within the tunica vaginalis.

Etiology.—This type may be due to persistency of the acute form, but in the majority of instances it is due to diseases of the testes or epididymis. Cases of primary diseases of the tunica vaginalis have been reported as a cause, Hildebrandt citing a gumma, and de Vlocco, two cases of tuberculosis.

Trauma has been considered a causative factor. Injuries at birth have been thought responsible for the congenital form. Interference in the return circulation has been mentioned. Sexual excess has been held by some to be a factor. In the tropics the filarial embryos have been found in the sac contents. Age is not a factor because it is found in all decades of life.

Pathology.—The fluid is a clear serous liquid, resembling blood serum; straw colored; neutral in reaction; specific gravity, 1.020 to 1.026. If infected, it will be cloudy, and brownish red in cases of recent hemorrhage. Albumin is present in about six per cent of the cases. Glucose, fibrin, and fibrinous bodies have been found. Occasionally spermatozoa are seen due to rupture of the seminiferous tubules. The fluid may appear milky because of the rupture of lymphatics of the spermatic cord. Microscopic examination shows endothelial cells, few leukocytes, cholestrin crystals, and bacteria in infected cases. The amount of fluid varies from three to fifteen ounces.

The Sac.—The cavity may be single or multilocular, due to adhesions between the layers of the tunica. The walls in the long-standing cases are usually thickened. Calcification in localized areas may be present. Due to pressure of the fluid and thickening of the connective tissue, atrophy of the testicle may occur.

Symptoms.—The condition comes on slowly, does not favor either side, and may be bilateral. The swelling is smooth, elastic, dull on percussion, and transmits light. It is pyriform, with the base downward. The skin is freely movable over the tumor. It gives no impulse on coughing, unless complicated by hernia, and is irreducible.

Diagnosis.—The characteristic type of the tumor, history of slow growth, normal sized cord, absence of subjective symptoms other than weight, and the transmitting of light except in cases which are complicated by thickened wall, hemorrhage, pus, or chylous lymph. The testicle usually lies behind, except when held by adhesions.

Differential Diagnosis.—Hydrocele should be distinguished from hernia, hematocele, chylocele, spermatocele, solid tumors, and infections involving the scrotum.

Hernia gives an impulse on coughing, tympanic note on percussion, is reducible unless strangulated, and then there will be a history of a preëxisting tumor with the added recent symp-

toms. There is no transmission of light in case of a hernia.

Hematocele.—There is usually a history of recent injury, a rapidly swelling tumor, skin ecchymoses, and there is no transmission of light.

Chylocele.—The creamy nature of the fluid and the presence of parasites are characteristic.

Spermatocele.—Microscopic examination of the fluid is the only positive way to distinguish this condition. Both may be present in the same individual.

Solid Tumors.—These have a rapid growth, pain, absence of fluctuation, nonelastic feel; the tumor is heavy and the cord, veins, and lymphatic glands are involved. The rapidity of the growth usually ushers in early systemic symptoms.

The inflammations of the scrotum are produced by extension usually from the testis or epididymis. You may elicit a history of an initial sore, in syphilis. The tuberculin test may help in tuberculosis. The lymph glands are involved and the overlying skin is adherent.

Prognosis.—The condition in children may be cured spontaneously or after tapping. In adults this rarely takes place. There is but little danger to life unless some complication, as infection or hemorrhage, results. At times it causes atrophy of the testicle.

Treatment.—The accepted treatment of hydrocele of the tunica vaginalis is divided into palliative and radical.

The introduction of carbolic acid or other irritants into the sac after evacuation of the fluid is used but little at present. In infants, aspiration and the application of evaporating lotions may be tried; also, if the patient wishes temporary relief or if the radical operation is contraindicated.

If aspiration is to be used, the skin should be cleansed, a bloodless point selected, and injected with novocaine. The tumor is then held firmly in the hand and a medium-sized trocar and cannula, guarded with the thumb or forefinger, is plunged upward and backward into the sac. The trocar is then withdrawn and the fluid allowed to escape. Care should be taken not to injure the testicle or cause bleeding by cutting a blood vessel. After the fluid is withdrawn the wound is sealed by collodion and a firm bandage applied. The patient should remain quiet for a few days. Aspiration is contraindicated in hydrocele with thickened walls.

Rádical operation is the best method to effect a complete and permanent cure. Von Bergman introduced excision of the sac. This is particularly applicable if there is a thickening of the parietal wall of the sac. A local or general anesthetic is used and the field prepared in the usual manner. The tumor is held by an assistant and an incision made the entire length of the mass, down to the tunica vaginalis. Then the sac is dissected free and delivered unopened. The sac is then cut away close to the testicle and all bleeding stopped, the skin sutured, and a snug bandage applied. The patient should remain in bed for a few days.

Eversion of the sac, as recommended by Jaboulay, is popular today. Its object is to bring the serous layer of the tunica vaginalis in contact with the connective tissue of the scrotum. In this manner it causes absorption of any serous fluid. The preparation and incision are as described above. The sac is then opened its entire length, the contents evacuated and the cut edges turned behind the testicle. Catgut sutures are used to keep it in place. Care is taken to stop all bleeding and the testicle is then replaced. The scrotum is sutured and a snug supporting bandage applied. The patient remains in bed for several days.

A modification of the bottle operation of Andrews consists of making an incision in the neck of the sac and forcing the testicle through. The sac is then turned inside out and left without suture, or one or two sutures may be put in to prevent reinversion. The contra-indication to this operation is an old thick-walled hydrocele.

For excision and eversion, Winkelmann's operation is the most popular method in use today. The anesthetic, preparation, and initial incision are the same as described above. The parietal layer of the tunica sac is carefully dissected free, and the sac is cut off to within a half inch or so of its visceral insertion. The edges of the parietal stump are then held by a continuous catgut suture. Care should be taken to secure all bleeding points, also that there is no constriction of the cord at the upper pole. The wound is closed (with or without drainage) and the usual bandage applied. The complications of the radical operation are hemorrhage, atrophy of the testis, and recurrence.

Other forms of hydrocele due to abnormalities of development are:

Congenital.—This form occurs in infants—rarely in later life. It is due to persistence of an opening between the cavity of the tunica vaginalis and the abdomen. When the patient is in the recumbent position, the mass will disappear. If complicated with hernia, the gurgling can be detected on reduction. The probability of spontaneous cure is reduced when associated with hernia.

The treatment advised is aspiration guardedly, because of the association of hernia; otherwise operation with ligation of the sac below to close the tunica vaginalis.

Infantile.—This form is more common than the congenital. The fluid does not communicate with the abdomen. Hernia is a frequent complication. An open operation is indicated.

Inguinal.—This type is rare. It is a collection of fluid surrounding an undescended testicle.

Hydrocele of the cord.—There are two varieties, the diffuse and the encysted.

The diffuse type forms a boggy infiltration of the tissues around the cord produced by a passive exudation from the veins and lymphatics. The symptoms are a diffuse, boggy swelling, irregular in outline, slightly translucent, and it may be complicated with hernia. If painful, incision is advised for the treatment. In the encysted type, there is a localized collection of fluid in the course of the cord. The fluid does not communicate with the abdomen or tunica vaginalis. The cysts may be single or multiple, and occur more often in children.

Hydrocele of Hernia Sac.—This is a collection of fluid in the hernial sac after the reduction of hernia. Herniorrhapy is advised.

Hematocele.—This is a collection of blood in the cavity of a hydrocele. It may be traumatic or spontaneous in origin. It is either acute or chronic. The acute form is usually caused by trauma or violent muscular strain, and may follow operation on the hydrocele sac, epididymis, or testes. The chronic form may arise from chronic inflammation of the tunica vaginalis, epididymis, or testes. Arterio sclerosis and sclerotic changes in the layers of the tunica vaginalis also contribute to the chronic form.

Scrotal enlargement may be slight, slow or rapid in formation. If due to trauma, the pain is usually severe. Fluctuation may be present. Ecchymoses are usually present. There is a history of recent injury or operation on scrotal contents, the nontranslucency and the presence of ecchymoses.

In the acute form, the treatment should be palliative—rest, elevation of parts, and application of an evaporation lotion. Resolution usually takes place. If the swelling persists, an incision should be made and the contents evacuated. Excision of the sac is at times indicated in the chronic form. In cases of long standing, with much pressure, the testicle may be so injured that its removal is advisable.

Spermatocele.—These are true retention cysts in or about the epididymis or testes. Any interference with the outlet of the seminiferous tubules may cause cystic formation. These may be unilateral or bilateral. With relation to the tunica vaginalis, they are extravaginal or introvaginal. The former is more common.

It usually develops during the time of greatest sexual activity. It may be bilateral. The content is usually a few ounces. Palpation will reveal the cystic character of the tumor. The location of a painless cystic enlargement and the elimination of the solid tumor should confirm this condition. The aspiration and examination of the fluid will suffice to clear up any doubts.

Small cysts that give no symptom, may be left untreated. For the larger type, open operation is indicated.

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DIFFERENTIAL DIAGNOSIS AND TREATMENT OF SOLID TUMORS OF THE TESTICLE, WITH REFERENCE ESPECIALLY TO TERATOMA

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Growths involving the scrotal contents are commonly seen. Malignant tumors are comparatively rare. It is imperative that a careful study of scrotal content masses be made early in the case, in order to exclude potential or actual malignancy. The family physician is usually the first person appealed to by the patient. In the past, our experience has been that a thorough examination is sometimes neglected. Where there is an element of doubt as to the real nature of the growth, neglect is dangerous. If scrotal malignancies are to be permanently benefited, early radical removal offers the best prospect for cure. The classification of scrotal content tumors is not well understood and defined as it is with other growths and that which appears as a benign mass may contain transitional cells that eventuate in malignancy and early metastasis. Even after microscopic section study of some of these tumors, the pathologists are not certain of the proper classification. In view of this fact, the early and thorough study of a scrotal mass cannot be too forcibly urged.

The blame for procrastination should not be laid upon the physician, for in most cases that we have seen, the patient has delayed consultation with the doctor. This may have been due to a false sense of modesty combined with a feeling of past venereal guilt. These patients are often married men and fear to be questioned on their previous venereal careers. It is generally admitted that antecedent disease or injury plays

a part in the malignant changes encountered in the breast, the uterus, the stomach, and other organs. In the testicle it has been my experience that with malignancy the previous venereal history does not have so important a bearing. Of course, in tuberculosis of the epididymis, fibrosis and tumors of this structure, we feel very differently. Tuberculous and other changes are very much enhanced by antecedent inflammatory processes. It has been my experience that most cases of tuberculous epididymitis have been preceded by a gonorrheal epididymitis. The usual history is that of an infected epididymis that convalesced slowly. The gland usually possesses a larger and more tender immoral button that later becomes the seat of a tuberculous infection. Tuberculosis of the epididymis, I consider a very dangerous disease and one that should be dealt with early and radically. This question will be considered at greater length subsequently in this paper. It is not strictly according to rule and regulation to consider some of the problems for diagnosis that we see in the scrotum as tumors but in so much as our paper deals with diagnosis these scrotal involvements should be mentioned. It will be well to go over them separately and treat in a general way their distinguishing clinical characteristics: (1) Hydrocele with thickened walls. (2) Chronic epididymitis. Hematocele and spermatocele—gonorrheal, tuberculous, and other infections. (3) Gummata. (4) Malignant growths.

The hydrocele of the tunica vaginalis, of recent origin and uncomplicated, should not be incorrectly diagnosed. Its history of gradual onset following an injury or disease of the epididymis or internal abdominal disturbance interfering with proper lymphatic drainage generally directs one to the diagnosis. Its shape, transmission of light, weight, consistency and its gradual enlargement are all readily determined. It, however, can be the curtain behind which a tuberculous, syphilitic, or malignant growth may hide. Therefore, in hydrocele that is complicated by a thickened sac, hemorrhage, or other peculiar symptomatology, it is well to be guarded in the preoperative prognosis. Just here I feel that unless the surgeon is certain that he is dealing with an uncomplicated hydrocele, he should make it plain to the patient and some member of the family that he may be called upon to remove the epididymis or possibly the testicle, and if the question is sufficiently in doubt, to obtain the patient's permission to do as the operator's judgment directs. Failure to have such an understanding given either in writing or in the presence of competent witnesses, may, and has, led to disagreeable legal complications. I make it a rule to have the full consent to do what is thought best under such conditions. In acute hydrocele or one which makes its appearance very rapidly, the surgeon should always bear in mind the possibility of a tuberculous epididymis. I have seen this so often, it should always be considered.

The Thick-Walled Hydrocele

This condition is comparatively common in elderly men and is sometimes misleading and may be complicated by tumor of the testicle. The history will usually clear up the problem. Such cases generally have submitted to tapping and the sac has become markedly thickened by such procedures. They transmit light but not so well as a more recent case. If the hydrocele is complicated by a thickened sac in addition to a pseudo elephantiasis of the scrotal skin, it becomes a more difficult problem to decide whether a complicating tumor is present. A safe method is to tap the hydrocele and determine by palpation how much involvement there is in the testicle. Of course this should be done with great care so there will be no trauma of the testicle. Some of these testicles are large and so involved by inflammatory swelling that exploration and biopsy may be indicated.

Chronic Epididymitis

This term, though somewhat misleading is used for want of a better one. There are a series of cases that have had an acute epididymitis which has left a definite fibrosis of a portion of the organ. These cases often suffer from obscure neuralgic symptoms that sooner or later are prone to produce sexual neurasthenic disturbance. In some of them the pain and discomfort is a very definite problem as well as to know what to do for them. I have tried drainage and injection of the vas deferens. These procedures may do good, but have sometimes made the condition worse, necessitating an epididymectomy. After epididymectomy, an annoying chain of symptoms may exist, and the patients are most unsatisfactory. In fact, I think that the urologist should approach radical procedures upon these cases, after a very careful analysis of the entire problem. There are, however, some of these patients who respond very happily to surgical treatment. It has been our experience that in some of these cases, in which there is a marked fibrosis and thickening, the patients are relieved by operation, probably because pressure upon the nerve terminals has been removed. An epididymis that never quite clears up after an acute gonorrheal infection, but is

alternately acutely tender and swollen for a week or so and then improves, is always dangerous for some of them eventuate in tuberculosis of the gland. Personally, we have seen some striking cases of miliary tuberculosis that have had their inception apparently from a tuberculous epididymitis that followed an acute gonorrheal infection. In these cases, we always advise surgery, and then have the patients migrate to an equable climate such as southern California or Arizona. In our experience, the change of climate is a very important feature in the ultimate cure. The radical procedure recommended by Dr. H. H. Young in which he removes the entire vas and the seminal vesical, etc., we have followed and consider it the best in extreme cases. It, however, is not necessary in every case, especially so when a change of climate is made. Some of these cases are at times confounded with possible tumor formation.

Hematocele

We have seen this condition result from injury, blows, punctures, crushes, and other trauma. Hemorrhage may occur within a malignant tumor. Its onset and symptomatology have always been so evident that it should not be confounded with tumor. We have seen it take place, however, in a scrotal sac that was the domicile of a tumor and the patient should always be carefully questioned whether the testicle was enlarged or contained any lumps before the injury was received. I have seen two cases of hematocele that occurred in conjunction with injury of a testicle that was the seat of a tumor. In one instance the man jumped into a swimming pool and the impact against the scrotum as he descended caused a hemorrhage. In this case, the diagnosis of tumor was made from the history. In the other case, which occurred from having come in contact with the pommel of a saddle while horseback riding, it was not made until operation disclosed a growth in the testicle. Therefore, when the surgeon is called upon to deal with hematocele, he should always go carefully into the question of enlargement or abnormality of the structure previous to the injury. The differential diagnosis is not always easily made, but when the epididymis can be outlined, it is in favor of hematocele.

Spermatocele

Spermatocele is so rarely seen and of such a character that it should not be confused with tumor. The same may be said of varicocele excepting that a varix may be associated with tumor. Again, the veins may become thickened and hard simulating neoplastic change.

Gumma

This granulomatous change in the testicle should always be considered in the differential diagnosis of tumor. I have seen numbers of gummatous testicles and had the ignominy of doing an orchidectomy for a supposed malignancy of the gland which upon microscopic study was a gumma. In defense of my mistaken diagnosis, it may be well to state that the patient's Wassermann was negative and when first questioned he gave no history of syphilis. After a rigid cross examination, he admitted having had a so-called "hair-cut" upon the glans penis that healed slowly. To account for his apparent syphilitic rest, he stated that he had lived in the tropics the greater part of his life and had a sluggish liver for which he regularly took calomel as much as 5 and 10 grains every week. I believe his syphilis was kept in abeyance by his calomel and when he returned to the temperate climate, it asserted itself by gummatous changes in the testicle. A carefully taken history will go far toward clearing away the doubt. Again, the therapeutic test will do so. In some gummatous testicles, the lesion is very persistent and resists active syphilitic treatment while in other instances will disappear very rapidly. The baffling cases are those in which the man gives an old history of tertiary syphilis and presents himself showing an enlarged testicle that resists antisyphilitic treatment. Two such cases in my service at the Philadelphia General Hospital proved to be a teratoma. In one of them we operated; and the other at autopsy showed metastasis to the long bones, the lungs, and the neck on the right side.

The histopathology of teratoma of the testicle is a difficult subject to present. It is a problem upon which the pathologists are not substantially agreed and it further is involved by differences of opinion in the classification of the tumors. My function is simply to present in as clear a manner as possible the types of tumor as the surgeon sees them. The principal stress will be assigned to the discussion of the methods of attack that have given the best result at the Jefferson Hospital.

Testicular tumors constitute from one-eighth of one per cent to one per cent of tumors seen in man. From these figures it is plain that the incidence of these tumors is small. They, however, do collect their toll and when met with should be considered as very dangerous to life. The testicle because of its complicated embryonic structure, partaking as it does of the entire blastodermic membrane, necessarily retains vestigial remains of these separate structures,

hence the histopathology may show attempts upon the part of nature to reproduce practically all of the different tissue elements of which the body is composed. Hair, skin, teeth, muscle, nerve, bone, liver, alimentary, and numerous other cellular efforts have been identified as component parts of such growths. This abortive growth on the part of nature has produced a sort of pathologic potpourrie as to the histopathologic structure of these growths. Teratoma is not accepted by all as the proper terminology to apply to these tumors. Teratology is the study of monsters and their making, but in so much as these tumors have presented such an array of different tissues, the term teratoma seems the best applied. There are all the necessary elements present to produce a monstrosity but the final collective or formative force that makes monsters is apparently lacking and consequently we have the conglomerate mixture of cellular elements herded together to produce a tumor that, for want of a better term of classification, we call teratoma.

The testicular teratomata are conglomerate aggregations of tissue derived from one or all of the three germinal blastodermic layers. They may be monodermal, bidermal, or tridermal in type. Because the tumor may partake of all or any one of these layers, it is capable of producing structures that represent practically all the tissues of the body.

Ewing believes that practically all tumors of the testis arise from teratomatous structure. One cellular element, however, may predominate to the practical exclusion of others and produce a growth that resembles an epithelial tumor, a connective-tissue neoplasm, or other growth. This accounts for the disparity noted in the classification of these tumors. In short, if the pathologist agrees with the above opinion, practically all testicular new growths are originally of teratomatous origin. There are reported exceptions to this deduction but when basically analyzed one is persuaded by Ewing's studies and conclusions that they are so-called one-sided developments that should be classed as of teratomatous origin. Langhans reported fibromata of the tunica albuginea, the testicle epididymis, and the cord, but the final inference is that they arose from teratomatous tissue. Rindfleisch described a myoma of the testis containing nerve fibers and ganglion cells. Benenati reported a large rhabdomyoma of an undescended testicle with round cell metastasis in the lymph nodes. Stoerch and Wood have each presented somewhat similar cases. Here again, however, Ewing considers them one-sided developments of teratomata. Rokitansky and Neumann thought their cases came from the gubernaculum of Hunter since they were attached to the lower pole of the tunica. In view of the peculiar and grotesque changes that can and do occur in the sex glands of women and which are not well accounted for, cannot a somewhat similar mechanical or development freak force produce strange conditions in the testicle but in so much as such freakish peculiarities are rarely seen in other situations, is it not fair to assume they are of teratomatous origin?

Lymphosarcoma of the testis, a formerly common diagnosis among French pathologists is an undecided question. Ewing has seen two cases he thinks were genuine. Chevassau believes and taught that lymphosarcoma was in reality embryonal carcinoma. True lymphosarcomata have been described by Malassez, Ehrendorfer, and Debarnardi. These tumors are generally seen in young subjects and both testicles are usually involved. They run a fever and cutaneous and internal metastases are rapid. Apparently authentic cases of metastases of this growth to the testicle have been reported. The kidney, however, is more likely to be the seat of such implants. Tuberculosis is believed by some to influence its production within the testicle.

Statistical studies show that mixed or teratomatous tumors occur once in every 2,000 hospital admissions. The French statistics present a higher percentage but the question arises whether the growths described were all mixed tumors. Hinman's percentage was 0.06 per cent of male, hospital patients. In 300,000 admissions to the Mayo Clinic, including both sexes, 50 cases were found. Such studies should not be too readily accepted as representing the actual proportion but, nevertheless, they are the best at hand.

Mixed or teratomatous tumors of the testicle are generally unilateral. There have been exceptions reported but they are extremely rare. The right side is apparently most often affected. Heredity apparently plays no part. Trauma is believed by some to be responsible for a small percentage, while others, notably Young, do not admit its potentiality. In a series of seven cases personally observed, there was no history of definite injury, excepting that in two, the testicles were in the canal. Tanner and Dean, on the other hand, believe trauma is responsible for many of these cases. Retained or undescended testicle is thought by some not to play a part. I have operated upon two cases in which the gland was retained within the canal and, hence, we feel that it plays a part. It seems that undescent is partially due to some developmental defect and, insomuch as that may be the case, it is

fair to assume growth impulses in the sex cells may be abnormal. Again the age incidence is from 16 to 45 years or during the most active sexual part of man's life. There is much difference of opinion as to the causes of excitation to abnormal growths involving the testicle. Hinman, in a statistical study of 3529 cases of retained testicle, found but 6 teratomata reported. I concur with the belief of Tanner Dean that retention of the testicle within the inguinal canal increases the danger of malignant change. A testicle in the canal is more likely to be injured than one within the abdomen. We make it a rule to recommend either removal or artificial descent of such testicles, whereas when they are intra-abdominal we have usually left them alone. Some surgeons believe that intra-abdominal retained testicles are more liable to undergo malignant changes. This has not been our experience.

Diagnosis

The surgeon is consulted because of a large or small swelling in the testicle not necessarily painful but generally giving slight discomfort. The swelling may cause considerable pain, probably a pressure symptom when large and pressing upon the epididymis. The mass may be large or small, is generally smooth in outline, but may be bossed. It is heavier than a hydrocele, although hydrocele may accompany it. It does not transmit light but we have seen a sort of pseudo-transillumination in a cystic growth. The pampiniform flexus is generally more bountifully developed on account of the demands of the tumor growth. The feel of the mass and its weight have much to do with a preliminary diagnosis. Those master diagnosticians, Professors H. R. Loux and W. Joseph Hearn, first described to me the feel and sense of weight of the testicular malignancy. They said it feels very much as though a semi-solid mass had been placed in the scrotum. Of course, this does not pertain when the growth is cystic. If there is a question of doubt, a biopsy is permissible before emasculation, but trauma is very dangerous and a testicle that is enlarged from tumor or gumma is of no use other than adornment, hence its removal is not a serious problem. Glandular metastasis may occur early or late. The superficial inguinal lymphatics are as a rule involved later. The deeper chain along the course of the iliac vessels and distributed to the fascia of the iliac and psoas muscles are usually the first to present metastasis. If, however, they can be felt through the abdominal wall, surgical intervention is useless. Every case should have a careful x-ray study made for metastasis to the long bones, the lungs, and other structures. The diagnosis is not necessarily difficult but at times it will be confusing. The principal things to bear in mind are hematoma, tuberculosis, and gumma. The latter is most often confounded.

The prognosis is very discouraging and it is rather difficult to make the family understand that the man is probably doomed. This becomes difficult since the patient does not as a rule feel sick and very often does not have much pain. Of course, if an abdominal metastasis has occurred, and it is producing pressure symptoms, the case is different. The ordinary patient and his family rarely sense the danger. It is the surgeon's duty to make the situation clear to some diplomatic member of the family and it is always well to be perfectly frank as to what is likely to happen. Of course, they do not all die but the mortality rate varies between forty and ninety per cent in the mixed-tumor cases. They are very unstable neoplasms. I have seen instances where patients had no great discomfort and certainly no great amount of health loss while, on the other hand, I have seen small tumors of the testicle that produced early and rapidly fatal growths in the lungs and other organs. It reduces itself to the malignant potency of the type of growth. Of course, the carcinomatous type is malignant and generally fatal, but not so rapidly fatal as those tumors that present cartilage development. The true dermoid is not so malignant, but this type we have never seen. Bland-Sutton reports them as seen in the testicle of the horse. There have been several theories put forth to account for these tumors: the blastomere theory, and the totipotent cell theory of Marchand and Bonnet. When finally reduced to a practical basis, and simply stated, they admit the probability that in the development of the testicle from the Wolffian body certain sex cells remain as embryonal elements, and through some aberrant force of growth become capable of producing all kinds of tissue with a malignant tendency.

The treatment is essentially surgical when the growth has not progressed to the inoperable stage. Surgical tampering has no place here. The operator should either do radical surgery or surrender the case to the radiologist. Mere orchidectomy rarely if ever cures a patient. Of course, if there should be a fungating foul mass, it should be removed but the only hope of a cure is founded upon a bold frontal attack upon the tumor and its lymphatic drainage area. There are several methods of attack as follows: Surgery, the deep penetrating x-ray radiation; Coley's fluid and radium. In the operation, the testicle is first removed completely with its

pampiniform plexus, vas, and entire lymphatic packet, up to the canal. The cord is then clamped and severed, preferably by the cautery knife. The clamp remains as a handle for traction on the cord. The high inguinal incision is then extended upward along the margin of the rectus to the tenth rib and the peritoneum exposed and, if possible, separated from the abdominal wall as in the Gibson operation for stone in the ureter. When the posterolateral abdominal parietes are freed of peritoneum, the cord and vas can be felt by downward traction upon the stump and the vas removed close as possible to its insertion into the male pelvic organs. The ureter is identified and protected, likewise the mesenteric artery. Next, the fascia of the psoas and iliacus muscles is dissected up as far as possible, to the renal vessels generally. This skinning process should be gently and carefully done with the minimum amount of squeezing and traction. The operator must be gentle but bold in his manipulations and as much of the vascular sheath as possible should be removed. This is not usually recommended but it is more readily accomplished than one would suppose. Drainage is inserted into the wound and closure made. Hinman has used a rubber tube with a radium capsule attached that is withdrawn a certain amount daily so radiating the operative field. This we have not done, since in our hands radium has not proved its value. Still, I would not hesitate to use it in this desperate emergency. We have used Coley's fluid, but not with success. X-ray radiation we profoundly believe in both before and after operating. It will be our rule in the future to have every case of teratoma of the testicle given a preliminary x-ray deep radiation unless the exigencies of the case do not warrant it. After operation, when healing is complete, we have always had them radiated. This problem and dosage we feel should only be undertaken by a thoroughly competent radiologist. Dr. W. F. Manges has carried out the treatment, and I am convinced that it has done much to prevent metastasis. Of the seven cases, two are living and apparently well, one after seven years, and the other after two years. We were unable to get into communication with the others.

Conclusions

1. All scrotal masses should be carefully studied to exclude a malignant tumor of the testicle.

2. Thick-walled hydrocele, gumma, hematoma, and tuberculosis are most commonly confounded with true malignant growths.

3. Hydrocele and hematoma may accompany a malignant tumor and add to diagnostic difficulty.

4. A thorough history and careful palpation of the mass are of the utmost importance in arriving at a true diagnosis.

5. Testicles retained within the inguinal canal are more liable to malignant change than those normally situated, or those within the abdomen.

6. The treatment in operable cases demands radical surgical removal of the growth and its lymphatic drainage area combined with ante- and postoperative deep penetrating radiation.

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220 South Sixteenth Street.

ABSTRACT OF DISCUSSION

Of Symposium on Diseases of the Testicle

Thomas C. Stellwagen, Jr., M.D. (Philadelphia, Pa.): Professor Keyes just spoke to me regarding the question of radiation. I did not get a chance to discuss that, but the most essential feature in the management of teratoma tumor is preoperative radiation with postoperative radiation, and this in a very strenuous way.

The problem arises of the radical approach, or the radical operation on these cases. If I had a tumor like that to be removed, I probably would not wish my abdomen opened. At the same time, however, I do feel that unless you can eradicate the lymphatic drainage you are at a loss. On the other hand, if a man has metastasis and it is a physical possibility to get the entire lymphatic, there is no question about that. I have in the past done these operations not by preradiation, but by postoperative radiation and removal of the testicle. The results are so disagreeable that I have practically decided I will do them all radically because I have two patients who were treated radically and are still alive and apparently healthy, one after seven years and another after two-and-a-half years.

E. L. Keyes, M.D. (New York City): I don't fully agree with Dr. Stellwagen. I have a perfect conviction that statistics are what they are reputed to be, and that one gets one's beliefs from one case.

The reason for my opinion is, first, because one of my associates at Bellevue did a complete operation for teratoma and the patient got infected and died. After his death he was recorded by the pathologic department as gumma.

I remember an utterly emaciated patient who was dragged into my office. This man had an enormous testicle, an emaciated frame, and an abdominal mass of nodes so large that as he lay on the bed you could see it. I sent him to the Memorial Hospital to be irradiated, and two weeks afterwards the patient reported at St. Vincent's Hospital for orchidectomy. I examined him and was surprised not to see the tumor, though it was still palpable. I removed the testicle, which was reported a teratoma.

He stayed in the hospital for two weeks, and when he left it was impossible for me to feel the tumor in the abdomen.

At Memorial Hospital they have a series of statistics which show a very high proportion of what we would not say are cures, but controls for varying periods.

Since thirty per cent of the patients who have been operated upon and who have recurrences which are deemed at Memorial Hospital to be inoperable are controlled by irradiation, leaves irradiation far in the lead.

Symposium on Head Injuries[*]

HEAD INJURIES FROM THE NEUROLOGIST'S STANDPOINT

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Craniocerebral injuries in this high-speed, motorized age have become quite common and even the doctor at the country crossroads may be called upon as the result of a highway tragedy. In large cities such accidents are commonplace. My experience has been obtained as neurologist to two large general hospitals, and my studies have been in association with the surgeon with whom I have been more than glad to share responsibility in diagnosis and treatment. This paper will attempt to show the general principles that guide me, rather than to give a statistical study to illustrate any particular idea. I cannot say how many cases of acute head injury I have seen in the past ten years but a rough estimate totals almost three hundred.

It is important to distinguish the purely surgical from the neurologic aspect in this type of injury. Lacerations of the scalp and fractures of any kind in the vault or base are surgical problems and there is no difference of opinion in diagnosis or treatment. Shock itself, the immediate general result of some injuries, I believe is also the problem of the surgeon, and unless it is successfully met there is no need for the neurologist. The neurologic aspect of these cases, however, is concerned with the damage done to the brain itself, and this includes hemorrhage, contusion, laceration, and edema. Concussion in my opinion is a doubtful term to use and no one is agreed as to what it means. It usually indicates contusion. I would limit the term to those cases of transient disturbance of consciousness without other symptoms, and usually such cases are not seen in hospital practice. Hemorrhage, of course, is in some form a common occurrence in head injuries, and I have found the surgeon keenly alive to the syndrome of loss of consciousness, recovery, followed by increasing stupor and the general symptoms of compression with or without paralysis, which indicate a meningeal hemorrhage. Diagnosis and treatment is usually sure and prompt. The tendency is, however, to think too much in terms of a surgical hemorrhage, and to forget that contusion, laceration with its possibility of intracerebral hemorrhage or associated edema, may cause equally alarming symptoms, and be quite confusing, especially if there develops a phase of compression, which is not unusual.

In my judgment it is very important to approach each case with a mind unbiased by any single factor in the history, or physical examination or even in one's past experience. The amount of damage done to the cranium does not indicate the amount of injury to the brain underneath. We have all seen some bad fractures of the skull with little brain damage and some cases with no fracture and much brain damage. Even the circumstances of the accident are no safe guide. A jealous husband struck his wife's paramour with a crowbar, mashing in the right parietal region, and yet the scoundrel got well with surprising little difficulty. Two brothers engaged in a wrestling match and one, losing his temper, pounded the other's head against a concrete floor three or four times and the poor fellow never regained consciousness. For several hours I stood helplessly by his bed uneasy with my doubts. The autopsied brain was red with petechial hemorrhages and dripping wet in edema. The thing that counts most is the general condition of the patient with reference to the degree of disturbance of consciousness, the pulse rate and vasomotor status, the blood pressure, the respirations, and the temperature. At the time of the first examination, I am much more interested in this than in any possible neurologic symptom per se, because these details singly and together indicate the status of the so-called vital centers in the medulla. The possibility of death is the most important problem.

The neurologic symptoms are not always striking, and even if they are, the general tendency is to exaggerate their importance and significance. It is very necessary to separate the wheat from the chaff. In general, cranial nerve palsies, especially of the oculomotor nerves or of the facial, do not mean much. Inactive pupils with an absence of the corneal reflexes indicate a grave prognosis. Definitely unequal pupils, if persistent, are strongly suggestive of a large hemorrhage on the side of the dilated pupil, especially if accompanied by signs of compression. Rarely the hemorrhage will be found on the other side. Fundus changes may or may not be present, usually not, in my experience, in spite of the stress that is usually laid upon them in the literature. Always study the eyegrounds in every case and repeatedly. Convulsions or

[*]Read before the Section on Surgery of the Medical Society of the State of Pennsylvania, Erie Session, October 3, 1929.

palsies, local or generalized, no longer terrify me in spite of the seeming urgent necessity for their relief. Always try to think of the various symptoms as paralytic or irritative and to classify them as focal, multiple, or diffuse. Try to determine whether the symptoms are immediate or delayed, and whether they are progressive or regressive. These words are not lightly used, and they signify an attempt to arrive at some kind of conclusion regarding the pathologic background. No matter what the neurologic symptoms, I have become more and more impressed with the necessity for caution in diagnosis. I have learned to take my time, as much as twelve to forty-eight hours, and I am in no hurry to counsel radical treatment or express a bad prognosis. A localized edema or a slight contusion may cause as much functional loss or irritation as a laceration or hemorrhage. Very often an angry, stormy situation may quiet down to a mild confusion or an uneasy delirium, the paralytic or irritative symptoms progressively improving. As my experience has increased the favorable cases seem to outnumber the unfavorable, and except in cases of massive hemorrhage from the middle meningeal artery (occasionally from the sinuses) it is rare for any focal symptom due to essential trauma to the brain substance to be relieved by a surgical procedure.

The bad cases of craniocerebral injury are bad because the patient never rallies from the initial shock, or because of the development of the much feared generalized cerebral edema. The evidence of this is often seen at a glance and needs no description. The signs of a possibly favorable case going bad are also well known, and it is a common practice to record frequently the pulse, blood pressure, respirations, and temperature. It would be well to add observations on the depth of disturbance of consciousness, especially whether it is sinking deeper and deeper toward coma. Here a balanced judgment must be used. No one sign is enough to depend on. A pulse of fifty is disquieting, but if other findings are still good, it may not be so bad after all. In the case of a patient seen within the past ten days almost all the symptoms were discouraging except the respirations, which were strikingly peaceful and regular. A hopeful prognosis was ventured with little encouragement from my colleague, and in a few days it was realized.

In some cases there is considerable mental irritability, clouded consciousness, physical restlessness, and even violence. The neck may be stiff, Kernig's sign may be present, and there may be a considerable increase in temperature. If these signs are seen early it means an aseptic meningitis due to the presence of free blood in the subarachnoid spaces, which is easily confirmed by a lumbar puncture. Blood in various quantities is almost a constant thing in injuries associated with fractures of the base and in other conditions where through tearing of the meninges bleeding from any source escapes into the normal channels of the cerebrospinal fluid. Its importance can be judged only in connection with other symptoms.

Lumbar puncture with manometric readings is a procedure of value and is employed routinely by some men. When used with care it is free from danger and will give important information on the degree of intracranial pressure when the development or presence of cerebral compression is suspected. I personally advise a puncture and a reading only in the exceptional instance, because a proper study and examination of the symptoms described above are as a rule sufficient.

There is a certain amount of comfort to be obtained from a frank realization of the difficulties in diagnosis. Autopsies at times may seem humiliating, but we should remember the physical changes in the brain may be multiple, microscopic and macroscopic, and therefore a striking presenting symptom may after all not be the most important part of the story. So-called silent areas of the brain may withhold important information, and shock and medullary compression submerge helpful focal signs. In the strict sense mistakes are unavoidable. If it is a crime to adopt a policy of watchful waiting, I must plead guilty. We should be very careful in our periods of great anxiety and apparent helplessness not to do any harm. Aside from the usual methods to combat shock if present, the initial treatment should be absolute rest, an ice-bag, an enema, and a good dose of saline. Every other treatment should be carefully considered. Bromides, chloral, or paraldehyd by rectum are useful as sedatives. Morphin in my opinion has its place in the sthenic excitable cases, but only when the other remedies have failed. Except in the relatively few cases where a focal operation is positively indicated for the relief of a focal symptom and compression, the serious general symptoms are to be met by: (1) rectal or intravenous injections of hypertonic solutions; (2) lumbar punctures; (3) decompression.

For sometime I have been interested in the use of hypertonic solutions in states of supposed cerebral edema and have employed them with success in acute alcoholism, status epilepticus, and craniocerebral injuries. In the milder cases,

four ounces of a saturated solution of magnesium sulphate by rectum every four hours seemed beneficial; in the more severe cases, 200 c.c. of a 25-per-cent solution of glucose by vein was used. The results were sometimes very striking. In other instances where the general symptoms were not too desperate, I have used spinal drainage with benefit, but I have always felt this procedure was not without danger if the spinal fluid was almost pure blood or if it seemed probable that the brain was badly swollen and the ventricles distended with fluid. Large quantities of fluid need not be removed, 25 c.c. or less, depending on the degree of pressure. A good rule is not to depress the spinal fluid pressure more than one half of its elevation above the normal. If there is much blood, or high pressure, and spinal drainage does not appear to give results, a right subtemporal decompression is advisable and safer.

Frankness and practical experience, however, would seem to warrant the following statements: Some cases are brought to the hospital in a desperate condition. It seems obvious nothing can be done and nothing is done, for these patients will die within eight or twelve hours. Other cases are admitted and ordinary simple care is enough. This group is a large one and the results are good. A third class of injury, and the smallest of the three, requires special measures for relief, and it is these that are attacked by hypertonic solutions, spinal drainage, or decompression. As a matter of experience, a decompression is rarely done. I once listened to a very fine paper on the value of decompression. The indications and details were beautifully given. In discussing the paper, I asked: "In how many of say fifty consecutive cases was decompression done?" The answer was: "In two." Therefore, in any discussion of the treatment of craniocerebral injuries we must be careful to keep our perspective and not be guilty of distortion by talking too much of any one procedure.

Just a few remarks now on "after care." For sometime I have felt these patients are allowed out of bed too soon, and that this is partly the cause of many of the late symptoms, such as headache and dizziness, which prevent the patient's returning to work for many months. In a mild injury, three weeks in bed is not too much, and in more severe injuries six weeks should be the rule. No patient should be discharged without a final examination of the eyegrounds. I have a record of five cases in which definite degrees of choke disk persisted for four to eight weeks after injury, and in one instance, after the patient had left the hospital, serious damage to the optic nerve was found when he was forced to return because of violent headaches.

In general the problem of the late effects of brain injury is important and for a long time it has seemed to me the vision of some industrial surgeons and insurance companies has been too narrow. Recently Penfield proposed draining the spinal fluid and replacing it with air in an effort to relieve certain so-called postconcussion syndromes. It is too early to be certain, but in a considerable experience with this treatment in the past year the results so far are most encouraging.

Summary

(1) The real problem in craniocerebral injuries is concerned with the amount and kind of damage done to the brain itself, and not to the cranium.

(2) The most important symptoms are those involving the general condition of the patient, particularly the depth of disturbance of consciousness and the degree of involvement of the medullary centers.

(3) The first principle should be to keep the patient alive.

(4) Focal symptoms except in cases of massive hemorrhage from large vessels are extremely misleading, often transitory or regressive, and should never be interpreted in haste.

(5) Do not be afraid to stand pat and do nothing. Be careful not to do harm. Operate when you are sure, but only after a careful evaluation of the symptoms has suggested a pathologic condition which the proposed surgical procedure might correct.

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SURGICAL MANAGEMENT OF CEREBRAL TRAUMA*

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The management of head injuries can be clarified immeasurably by disregarding the many and complicated classifications. Nothing but confusion has been contributed to the problem by those who have attempted to separate into groups different types and different degrees of head injuries. Anxious, both as clinician and teacher, to profit by whatever might be contributed to our understanding of the principles

*From the Neurosurgical Clinic of the Hospital of the University of Pennsylvania.

involved in the treatment of the patient who had sustained a head injury, after familiarizing myself with elaborate classifications, I was none the wiser and no better prepared to cope with the problem.

Obviously one must distinguish between the cranial and the intracranial injury. We acknowledge, in compound fractures of the vault, the importance of débridement when the tissues of the scalp have been contaminated, gravely contused, and lacerated. When the dura has been torn, the subarachnoid space exposed, and the brain tissue is protruding, thorough débridement without delay is the only insurance against meningitis and death. Such were the conditions in a patient I was asked to see forty-eight hours after the injury. Already infection was established and with it the rigid neck and Kernig's sign. Precious time had been lost and the patient's fate was sealed.

If there is no reason to anticipate infection, I deprecate the practice of removing all detached fragments in the compound comminuted fracture. If left in situ these fragments will heal in kindly; if detached, the patient recovers with a cranial defect of itself a potential source of disturbing sequelæ and often an indication later for operative repair.

Indentations of the skull without fragmentation of the inner table should be left alone; on the other hand, fragments depressed below the level of the surrounding margins should be elevated. Recently I was asked to express an opinion on the advisability of operating upon a locomotive engineer before he was allowed to return to service. He had a slight indentation or depression of the skull of a month's duration; in the x-ray, however, there was no evidence of fragmentation of the inner table, there were no projecting spicules penetrating the dura or impinging on the cortex, and I was forced to revise the opinion already given and advise against operation. Too much importance is attached to these trivial cranial deformities. If epileptic seizures later follow they are due, please remember, not to the cranial lesion, but to the damage to the brain. This is a practical point, one not always appreciated, one frequently disregarded.

For compound fractures of the base of the skull with communications through the auditory canal, surgical cleanliness, swabbing the auditory canal with dichloramin-T, the avoidance of the syringe, and the application of a pad of sterile cotton to absorb the escaping cerebrospinal fluid are sufficient. Fractures of the cribriform plate are a greater potential source of meningitis than those communicating with the auditory canal, and here it must be decided whether direct drainage through a trephine opening above the frontal sinus does not offer the patient greater assurance against infection. It is my belief that it does. Because of the inability of disinfecting the nares the possibility of contamination through the line of fracture to the subarachnoid space is very real and after all the reduction of the incidence of meningitis has done more than any other single factor to reduce the mortality of head injuries.

I will omit the A, B, C's of the treatment of cranial injuries. Except for the incidence of meningitis, neither the immediate nor the ultimate prognosis is in the least affected by the damage to the skull. With these few elementary statements we may pass at once to the vital and grave aspects of head injuries, those which concern the intracranial contents.

The patient is before us; we assume he has been struck by a rapidly moving object thrown from an automobile; he is unconscious. We hastily review in our minds the possible intracranial damage and we must decide at once whether the patient has a massive hemorrhage or a cerebral contusion or laceration without massive hemorrhage, or perhaps both. We are at once confronted with a grave clinical question, and cannot evade an earnest attempt to answer it. An answer must be forthcoming, for upon it rests the decision for or against immediate operation.

Parenthetically may I venture to say that the perplexity in the minds of the general surgeons in relation to head injuries is due for the most part to the fact that brain trauma has not been considered a neurologic problem. Cerebral trauma is as much a neurologic problem as cerebral tumor, differing only in that one happens to be an accute emergency, the other an affair of slow development. To deal intelligently with the case, one must take advantage of such available evidence as may be secured from the interpretation of the signs of disturbed cerebral function, both medullary and supramedullary. We are dealing with an acute neurophysiologic problem in which motor and sensory dysfunction, disturbed reflexes, cranial nerve lesions, alterations in the state of consciousness, and rhythmic variations of the symptom picture must be recognized and properly evaluated.

To revert to the original question, are we, or are we not, dealing with a massive hemorrhage, either extradural or intradural? First, let us clear the slate of middle meningeal hemorrhage. You are of course familiar with the classic picture, but let me remind you that there are two

confusing elements. When associated with a serious cerebral contusion there may be no interval period of consciousness characteristic of middle meningeal hemorrhage. We are guided, first, in this criterion by the gradual onset of signs of localized compression, chiefly a lower facial and upper extremity paralysis. If these can be demonstrated, exploration is justified. Second, bear in mind that one cannot always differentiate the pressure effects of middle meningeal hemorrhage from the effects of localized cerebral contusion. We have all made mistakes and will continue to make them since there are no fool-proof differential signs. Whenever there are reasonable grounds for suspicion, it is safer to explore, not, I maintain, by the reflection of an osteoplastic flap, but through an oblique incision and multiple borings along the line of the lower third of the Rolandic fissure and from there to the base. Through one, two, or, if need be, three borings, one can at once detect an epidural clot, if it be present, and be guided accordingly. If present, the opening is enlarged sufficiently to expose the vessel injury and effect hemostasis.

Greater nicety of judgment, however, is required in the determination for or against operation when there may be a diffuse widespread subdural hemorrhage of pial origin. Blood is poorly tolerated in the subarachnoid space; not only may the immediate effects be serious, but ultimately one may be confronted with the ill effects of a chronic subdural hematoma.

We must assume that a diffuse subdural hematoma is almost invariably a complication of a grave cerebral contusion or laceration and I should advise exploration when there are signs of cortical irritation or suppression sufficiently focal to determine a localization; twitchings, convulsive seizures, paresis or paralysis, persistence of blood in the cerebrospinal fluid, prolonged unconsciousness, these are the guiding signs.

These remarks are preliminary to the major problem. This is still before us, because the high mortality of injuries of the head is the result not of fractures per se, not of hemorrhage per se, not of concussion. The latter is a term popular with the laity and the newspapers, interesting only to those who wish to indulge in an academic hairsplitting discussion of its precise definition. Let us not remove that source of intellectual diversion, but proceed to digest the meat of our problem, cerebral contusion and laceration.

One should see in the severely contused and lacerated brain a diffuse lesion, areas of extravasation, minute petechial hemorrhages far distant from the site of impact, in hemispheres, pons or medulla, minute or gross lacerations. Superimposed upon these a rapidly spreading edema from cortex to brain stem. The acknowledgment of this is fundamental to both an understanding of the symptom picture and the direction of appropriate treatment. Thus one should visualize the tissues of the damaged brain.

It requires no great exercise of one's imagination to build upon this the symptomatic superstructure. Here is the patient; with more or less profound loss of consciousness, with one or more cranial nerve lesions, it may be an oculomotor, abducens, or facial. Other nerves, the olfactory or auditory, may be involved but in the unconscious patient there is no means of detection. A general state of relaxation of the extremities or it may be one arm or leg may be more limp than the other, suggests paralysis. The reflexes may be entirely abolished if the lesion be profound or if present more active on one side than the other, suggesting a unilateral, cortical irritation. The eyeground should be examined, but do not expect at this initial examination to find any signs of pressure. The blood pressure may be normal, but a lumbar puncture records a high spinal pressure and blood-stained fluid. Watch the breathing and look for retardation of the respiratory rate or Cheyne-Stokes' phenomenon. The pulse is noted: if it is rapid, normal, or subnormal.

The findings of this initial examination are recorded and are invaluable for comparison. Orders are then given for the treatment and observation. An x-ray examination, ice-cap to the head, special duty nursing, record of intake of fluids and output, limitation of fluids for the first twenty-four hours to 750 c.c., urotropin, if there be a compound fracture, taken three times each day; in twenty-grain doses, for the first 24 hours; the rate of pulse and respiration recorded every half hour, the blood pressure equally often; a special chart should be at hand on which to record the pulse pressure. These are the routine instructions from the technic book for head injuries. Before leaving the patient, the nurse and intern are given special instructions on bedside observations, as, to record periods of restlessness; to note when the patient moves, if he uses one arm or leg more than the other; to note twitchings of face or extremities, of greater resistance to movement in any extremity; to watch especially for periodic changes in the rate and character of pulse and respiration. The intern is requested to note any alterations of reflexes. Finally, a few pro-

visional orders are written: codein and luminal, alternately, given hypodermatically every three hours if the patient be restless and 75 c.c. of a fifty-per-cent glucose given intravenously twice during the first twenty-four hours.

If such a system of records and observations were the practice, the management of the head injury would be simplified immeasurably. The initial neurologic notes and the subsequent observations provide the key to diagnosis, to prognosis and to treatment. I have been asked often to see cases in consultation twenty-four or forty-eight hours after the injury with only meager notes upon which to base an opinion. I ask in vain for information on the blood pressure, pulse pressure, or for a complete neurologic examination. It is only through records such as I have described that one can visualize what is going on within the cranial box.

In some cases fatalities are due to a hopelessly bruised and lacerated brain. I need not describe such a case to you, save to say that death within six, twelve, or twenty-four hours is inevitable. There is rapid pulse from the beginning, cyanosis, stertorous breathing, and a rapidly rising temperature; the end is near at hand. But eliminating this utterly hopeless group, to what do the patients succumb, who survive the first day, and often without help the second day. They succumb usually (I recognize certain exceptions) to a gradually increasing intracranial pressure, increasing as the edema spreads, until finally not only the supramedullary structures but the medullary structures become involved. This is not a fantastic theory. The effects of medullary pressure are as plain as the nose on your face: the slow pulse, the slow respiration, the rising blood pressure. Nature attempts to overcome the effects of the tight brain gradually being starved of its arterial blood by stimulating the vasomotor center, a purely automatic process. As the blood pressure increases, more arterial blood reaches its destination. Through variations in pressure and arterial competence, we account for the periodic, or so-called rhythmic changes; transitory changes in the state of consciousness, in the reflex phenomena, in the degree of motor relaxation, in the character of pulse and respiration. I know of no other clinical study where happier and more satisfactory results follow automatically the interpretation of the clinical signs by the pathologico-physiologic phenomena. It is an intriguing exercise to apply our knowledge of physiology, pathology, and neurology to a particular, definite, clinical problem.

We have to contend with pressure, in large part caused by the edema, and we fear overwhelming medullary pressure and collapse of the vasomotor, circulatory, and respiratory centers. Unconsciousness of itself has no fatal tendencies, neither have paralysis, a Hutchinson's pupil, and an exaggerated reflex. The indications for treatment should be kept clearly before you. If you assume that pressure is not due to massive hemorrhage, to which reference already has been made, the pressure of a traumatized brain can be relieved best by fifty-per-cent glucose solution given intravenously and by repeated lumbar punctures. Glucose is a hypertonic solution, withdraws fluid from the tissues into the circulation, where often it is needed to conserve the blood volume. Usually 50 c.c. twice a day will suffice, but do not hesitate to double the dose during the first twenty-four hours if the medullary picture is threatening; watch your tracing of pulse rate and pulse pressure; when these lines cross as the former decreases and the latter increases, the situation is critical. As a subsidiary measure for the relief of pressure, withdraw cerebrospinal fluid from the lumbar spine, if need be twice in the twenty-four hours, but not without certain precautionary measures. Do not ruthlessly drain off every drop of fluid, but with the aid of your manometer stop before the pressure reaches normal. I have never seen any ill effects from lumbar puncture so practiced and can testify to its efficiency as a means of relieving pressure, and in the conscious patient, of relieving headache and restlessness.

While attempting to relieve the pressure of edema it would be folly not to restrict the fluid intake. From 750 to 1000 c.c. daily will suffice for the two or three days you may be apprehensive. If restriction of fluid is persisted in too long, dehydration may determine an acceleration in pulse.

Some of my hearers, no doubt, are anticipating a word in favor of operation. I have no brief for operation save to condemn it. From a study of our clinical experience, a subtemporal decompression is not to be compared in its effect with hypertonic solutions and lumbar puncture. This paper has failed in its purpose, if you did not accept these views of the needlessness of operation. Unfortunately, at one time the practice was almost universal. The pendulum started five years ago to swing back and the light of day has permeated almost the entire thinking profession. Last year I was invited to a neighboring city to see a physician who had a head injury. His wife, a former trained nurse, was ill at ease. The doctor's head was shaved preparatory to operation. Upon my

arrival I found the patient only partly unconscious, there were no grounds for anxiety. I asked the attending surgeon what he had in mind. He said, "I am going to open him up." He did not seem to have any very clearly formulated indications, but said this was his universal practice. To be sure, this is an extreme illustration, but it serves to remind you of the haphazard practice of doing subtemporal decompressions, once so prevalent, now on the wane, and soon to be altogether abandoned.

There inevitably will be fatalities; the mortality rate of head injuries has been measurably lowered in modern days by the prevention of infection; it can be lowered further by exploring for hemorrhage in suspicious cases. Almost fifty per cent of massive middle meningeal hemorrhages are overlooked; the mortality rate will be reduced to its lowest possible figure when the pathology and the disturbed function of the contused brain is a matter of common knowledge.

The prognosis of the seriously damaged brain should always be guarded. Few patients who have had grave cerebral contusions ever wholly recover. In children, traumatic epilepsy is the gravest menace; in adults, vertigo, headache, defective memory, failure in any attempt at sustained application are the common sequelæ; frequent in the first six months or a year, sometimes persisting throughout life.

In the examination of patients with the sequelæ of cerebral trauma we have made it a practice of late to make an encephalogram, and we have been surprised to find in many cases some definite evidence of cerebral damage. In the last twenty-five posttraumatic cases, in all but one, the cerebrospinal fluid spaces appeared abnormal. In ten there was a unilateral cerebral cortical atrophy; in two, a bilateral atrophy; in nine, a cerebellar cortical atrophy; in seven, extensive pia arachnoid adhesions; in six, a unilateral, and in seven, a bilateral dilatation of the lateral ventricles; in six, a dilatation of the third, and in three, of the fourth ventricle; in three, there was no filling of the lateral ventricles.

These posttraumatic air studies have been most enlightening; first in demonstrating conclusively that the brain had sustained a serious injury; second, in confirming Penfield's observation that the encephalogram may be followed by complete relief of headache and other posttraumatic sequelæ. Furthermore, these posttraumatic air studies are of incalculable medicolegal value as affording indisputable evidence of an injury of sufficient gravity to cause a permanent brain deformity. The finding of large fluid collections or cortical atrophy in so many cases suggests to my mind unrecognized cortical hemorrhages. We have come, therefore, to regard the encephalogram as an essential agent in the study of the patient with posttraumatic sequelæ.

133 South Thirty-sixth Street.

ABSTRACT OF DISCUSSION

Of Symposium On Head Injuries

J. B. Lowman, M.D. (Johnstown, Pa.): Traumatic surgery differs from any other forms of surgery because there is no opportunity for preoperative treatment. The injury is the operation, therefore, we have to deal postoperatively as it were.

I am sure you recall the neglected condition in traumatic injuries of the brain, for instance, a policeman has hit a man with a club, he has been taken to the police station as drunk, and has died; or a baseball player has been hit over the head, the patient treated lightly, and the next day or so death has occurred. At the present time, close observation of the facts and symptoms has changed this condition. I am going to emphasize the practical terms of trauma. When a man has a slight blow over the head he should be observed very carefully and put to rest immediately. Indeed this is our point of view in the Bethlehem Steel Hospital of Johnstown, that no matter how trivial the accident may be, a man must be seen at once by some competent person and put to rest before returning to work. This prevents many serious conditions from being overlooked.

There is a condition, traumatic neurosis, in which there are headaches and vertigo, which I believe could be prevented if patients are put to rest immediately. The most important thing is rest in bed until all symptoms subside. The greatest wrong is done in sending the injured back to their homes or to work too early. One of the most important things in a brain condition, is the observation of symptoms and the intracranial pressure. I think intracranial pressure is one of the chief guiding points as to decompression operation. Some years ago I was more of a radical regarding decompression operations but have become more conservative since we have better methods of treatment and observation for the patient. Some patients do better with operation than without. The question arises here as to complications, whether or not a decompression would prevent some of these conditions and is preferable to conservative treatment. Personally, I believe not.

I saw some encephalograms from Dr. Frazier's clinic and was much impressed with them. I believe, however, several points should be considered. First, the type of case for which it is used for diagnostic purposes, as I believe that not all of us know in which class of cases it can be used successfully. The neurologist, the roentgenologist, and the surgeon should combine in the interpretation of the plates.

Charles H. Henninger, M.D. (Pittsburgh, Pa.): I agree with the essential points that have been brought out, particularly about decompression, the necessity for

x-ray studies, and the coöperation of the neurologist and surgeon in handling these cases. There are, however, several factors that were not touched that I believe are of sufficient interest to call to your attention.

The increased frequency with which we are seeing head traumas is due mostly to the complicated forms of manufacturing and the rapid methods of transportation. Most children suffering from head traumas are the result of automobile accidents. Some of these automobile accidents can be avoided, and I believe should be avoided, not by legislation alone, which can only control the speed limit, but those driving automobiles should have in mind the rights of the pedestrians, particularly children, and we should teach our children the great dangers in crossing or playing on the streets. We should provide better facilities for the children to obtain their physical development without running this hazard.

There are two elements in head traumas that are particularly important. The age of the patient injured should be taken into consideration. If the injury happens to the child before complete development of the brain, the effects will be much greater than in head traumas to the adult brain, and if the senile brain is traumatized, the damage is also greater than that of the individual in middle life. In neither of these cases can we expect the same results, regardless of our treatment. The senile brain will not respond in the same degree as the traumatized brain of the middle-aged individual, and in the undeveloped brain of the child, the normal development is often prevented.

This brings us to the head trauma of children, at the time of birth. This accident seems to be increasing, and here we must look forward to prophylactic measures. Our treatment is the same as for the accidents that have been mentioned. The frequency of cases of traumatized brain at the time of birth can be diminished by better obstetrics. I cannot emphasize too strongly the advisability of using forceps only as an instrument of necessity, using drugs that produce severe uterine contractions only when it is used for the benefit of the mother or the child, and that meddlesome obstetrics should be entirely eliminated.

We have many individuals who have passed through the acute stages of head trauma and are later cared for by the psychiatrist. We find decreased mental ability in children ranging from idiocy to the higher types of imbecility. We are often urged to have operations performed in these late cases, but after degeneration has taken place in the cortex and tracts, surgical and medical treatment is disappointing. We cannot hope for good results in these cases. Our best results are obtained by special physical and mental training.

If the individual is suffering from certain diseases when the head trauma occurs, the case presents another phase. If the patient is suffering from syphilis, paresis may be precipitated by head injuries. In a patient suffering from tuberculosis, head trauma may precipitate tuberculous meningitis. One aspect not emphasized was that of infection following head trauma. This is always an element of danger.

We should not dismiss this subject without considering posttraumatic psychoses and neuroses. If we are able to demonstrate by our neurologic examination organic changes in the brain, the interpretation is comparatively easy, but there are many cases that do not show organic changes, and these cases may present various types of psychoses. We know that during the World War, thousands of these cases were precipitated by stress, strain, and anxiety. I believe we are too ready to say, in many cases, that the onset of a psychosis was incidental and that the head trauma was not the factor in precipitating these conditions. When two or more factors are present, we are fortunate if we can give the proper interpretation.

Clarence McCullough, M.D. (Washington, D. C.): Before another section I quoted the figures from the report of the National Safety Council showing that there were 23,000 deaths from automobile accidents in 1926, and from 6 to 700,000 accidents from various causes in that year. I also had figures from the Highways Commission in Pennsylvania that showed there were some 24,000 accidents in the first few months of the year and over 1200 deaths so far. Dr. Small of Chicago called attention to the meeting of the National Safety Council in Chicago this week and that their recent figures showed there were 27,500 deaths from automobile accidents in 1928, and over 10,000,000 accidents in the United States. These figures are quoted to show the increasing frequency of this type of accident.

Dr. Wright has mentioned that all these traumatic cerebral cases should have an eyeground examination. Also I think there should be a routine examination of the visual fields because many of the defects brought out will be most illuminating.

Dr. Frazier speaks of the importance of the encephalogram. I believe the same thing could be accomplished in many cases by an examination of the visual field. Many of these cases of traumatic cerebral injury are classified as traumatic neuroses when, as a matter of fact, they are not traumatic neuroses but after a careful study by visual field and other examinations it will be found that they have grave cerebral injuries which have been overlooked. I have seen several such cases in the last few years.

The visual pathways extend from the retina to the cerebral and the occipital lobes. They have an extensive distribution and it would be remarkable if any grave or severe head injury could avoid injuring to some degree this extensive communicating network of fibers. Visual field studies are important especially if industrial problems are involved because they may reveal certain defects that would not be discovered otherwise. A case of hemorrhage into the temporal lobe which was partially located and removed, has been reported. Eagleton has written several communications along this same line. It will assist in prognosis. For instance, a man has an injury of the occipital region. He has a loss of vision that clears in three to five days. This method of study will help to determine the prognosis very definitely. It offers considerable aid in the solution of industrial problems. It is utterly impossible to carry out studies of this kind with unconscious or comatose patients, or with small children. These examinations can be made while the patient is in bed. Early and frequent examinations are necessary. Most of the injuries were from weeks to months old before I saw them. I have recently seen the patients within a day or so after the injury, and the visual field charting showed some very interesting facts. In the care of cerebral trauma the ophthalmologist should be in daily attendance. This suggestion has been pointed out by others. He should not be considered as a consultant, but should see the patient every day.

TREATMENT OF NEVI

The Hazard of Insufficient Destruction of Pigmented Nevi*

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The definition of *nevus* in its broadest meaning embraces any anomaly present at birth or appearing subsequently. Nevi present themselves in a great variety of clinical and pathologic formations on any part of the skin and may also involve the mouth, tongue, lips, genitalia, and indeed the nails and hair. In size, nevi range from that of a pinhead to an involvement of a considerable part of the body. They exhibit many variations in color, shape, numbers, and surface appearance. They may be papular, macular, verrucous, linear, variegated, striated, or in the form of grotesque masses.

Treatment of Nevi

The cosmetic result is of prime importance in treatment of benign nevi. The choice of method is that which gives the best cosmetic result. In the potentially malignant nevi (all pigmented nevi), the cosmetic result becomes subservient to the vital need of completely destroying the lesion as a precursor of cancer. Only the method which most effectively serves this means should be used.

If the lesion is small, and the nevi are destroyed by applying caustics, carbon dioxid snow, or liquid air, by means of electrolysis or thermocautery, good cosmetic results may be obtained. In the larger lesions, these agents are not the choice of method. They are time-consuming and the cosmetic results are generally poor. Indeed, in the treatment of very large nevi, as those shown in Figures 1 and 8, these methods are not applicable. Moreover, in potentially malignant pigmented nevi, these agents should not be employed since they are not sufficiently destructive and hence may constitute irritation. A possible exception to this statement is the thermocautery in the destruction of small pigmented nevi.

Limitations of Roentgen Ray and Radium

Roentgen ray and radium have no place in the treatment of nevi excepting in elevated hemangiomas (fig. 5). In all nevi, other than the elevated hemangioma, the amount of roentgen ray or radium required to cause nevi to disappear is of sufficient strength to injure the skin. The end result is generally a degree of radiodermatitis ranging from necrosis to telangiectasia, a dry skin, with or without atrophy. Not only is radiodermatitis a poor cosmetic result, but it constitutes a hazard since epithelioma may develop as a sequela. Moreover, it is now known that even a simple erythema caused by roentgen ray or radium, more particularly roentgen ray, may be followed at some later period by telangiectasia.

Fig. 1. A verrucous nevus present since birth. It was destroyed by a high-frequency current, in three stages, under gas anesthesia.

Surgical excision of nevi is generally undesirable since the cosmetic results are inferior. In huge and diffuse nevi (figs. 1 and 8), and in those involving certain parts, as the ear and nose, surgical excision is unappropriate and difficult to accomplish. The exception is in certain types of angioma, discussed later.

High-frequency Current

The high-frequency current is more useful and more generally the method of choice in treatment than any other agent. This method gives such good cosmetic results that it can advantageously be employed for all types of nevi. The only exception to this statement is in the treatment of certain angiomas, discussed later.

If high-frequency current is employed, the destruction of tissue can be so controlled through regulation of the proper current strength, that lesions varying in size from a pinhead to a considerable mass can be destroyed. Bleeding is better controlled. The current renders the oper-

*Read before the Section on Dermatology of the Medical Society of the State of Pennsylvania, Erie Session, October 1, 1929.

ative site aseptic. The tissue is not burned or charred, so that healing is expedited.

All types of small nevi can be destroyed under local anesthesia by electrodesiccation (monopolar high-frequency current of the Oudin type). Massive, diffuse nevi of the type shown in Figure 2 can be destroyed more quickly by electrocoagulation (bipolar high-frequency current of the d'Arsonval type) which is much more intensive and penetrating, or by the endotherm knife (tissue cutting by undampened oscillations of the high-frequency current). The endotherm knife removes, or cuts away so to speak, elevated nevi much more quickly than they can be destroyed by electrocoagulation.

Large, diffuse nevi (figs. 1, 3, and 8) are destroyed under gas anesthesia. The nevus shown in Figure 1 was destroyed by electrocoagulation under gas anesthesia, in three stages.

No nevus can be removed without leaving a scar. The only exception to this statement is the removal of elevated hemangioma by radium and the removal of the port-wine mark by ultraviolet ray.

High-frequency current produces a minimum degree of scar, which is more likely to be soft and pliable than that produced by any other agent. In the destruction of large nevi by high-frequency current, skin grafting is seldom necessary. If necessary, the scar may be made soft and pliable by subsequent treatment with filtered roentgen ray as is used in treating a keloid. The scar was thus treated in patients shown in Figures 2, 4, and 10.

In the destruction of nevi, not potentially malignant, by a high-frequency current, the aim is to destroy only the lesion, no more and no less, in order to obtain the best cosmetic result. Insufficient destruction necessitates a second operation and unnecessary destruction of normal tissue produces excessive scar. When to stop destruction as the level of the skin is approached must be learned by experience. The proper current strength to be employed depends on the size of the lesion and must be learned by experience. The care of the wound after the destruction of a large nevus is helpful in obtaining a desirable scar.

Clinical types of angioma embrace nevus flammeus (port-wine mark), nevus vasculosus (strawberry mark), and angioma cavernosum (cavernous angioma).

Nevus flammeus, a nonelevated angioma, dark-red or purple in color, aptly designated as port-wine mark, is shown in Figure 3. The use of roentgen ray or radium is not to be recommended for treatment since destruction is accomplished at the expense of damaging the skin. Good results have been reported from the use of radium but I regard the risk as too great to justify its use. This type of nevus is the only one in which ultraviolet ray may be of value. It is applied by means of a water-cooled mercury quartz lamp with pressure. It usually fails, however, in causing the angioma to disappear, but if successful, there is no scar. The application of carbon dioxid snow or liquid air may give good cosmetic results in small lesions. In large lesions this method is slow, with poor cosmetic results. Destruction of the lesion by

Fig. 2. Final result, about eighteen months after destruction of the nevus. The scar was soft, pliable, and almost flesh colored. After healing of the areas operated on, the scar was thick and at places elevated and was treated with filtered roentgen ray.

electrodesiccation is the choice of method in many instances. Figure 4 shows the result of such treatment.

Nevus vasculosus is a red elevated lesion of variable size. Excellent results are obtained with the beta rays of radium if first degree reactions are avoided and treatment is not too frequent. It is possible to cause a disappearance of the lesion without a scar and without destroying hair follicles. A simple, quicker, and more economical method of treatment is destruction by electrodesiccation. With this method, in small lesions, the scar is negligible. In larger lesions, the cosmetic result, although not bad, does not compare with that obtained from radium.

Angioma cavernosum involves the deep vessels and is presented as a variable size tumor.

Although the roentgen ray has been employed with good results, radium in most instances is the treatment of choice. For superficial lesions, the beta rays are employed and for deeper lesions, the gamma rays are used. In selected

Fig. 3. A nevus flammeus (port-wine mark) present since birth. It was dark red, the surface studded with small purplish papules. It was previously treated with a variety of agents. There was a small area of radiodermatitis from previous radium application. The entire nevus was destroyed by electrodesiccation in one operation, under gas anesthesia.

Fig. 4. Final result about six months after destruction. That part of the nevus involving the lower lid was destroyed without a resulting ectropion. In places the scar was thickened and elevated and was treated with filtered roentgen ray. The final scar was soft, smooth, unelevated and almost flesh-colored.

cases surgical procedure may give good results. The injection of caustics into the angioma (unless the base is ligated) is not without danger. The lesion may also be removed, shelled out so to speak, by electrocoagulation, or by the endotherm knife. There is, of course, a resulting scar. The selection of this method would be particularly influenced by the location of the angioma. Figure 5 shows an angioma cavernosum which was treated with radium. The lesion disappeared without a scar and without destroying hair follicles (fig. 6).

Nevi as Premalignant Lesions

Malignant melanoma is the most malignant of all tumors. The frequency of the pigmented mole, a potential malignant melanoma, makes the entire subject of cutaneous melanomata of great clinical importance to all practicing physicians.

To discuss properly the hazard of pigmented nevi in relation to potential malignancy, it is desirable to discuss first histopathology. The term, melanoma, is given to any abnormal collection of melanin-pigmented cells, in the skin, the eye, or elsewhere. Cutaneous melanomata are divided into benign and malignant.[1] Of the benign, those containing the nevus cells are of the greatest importance since this cell is potentially melanoblastic, from which arises the malignant melanoma. A less important group is the secondarily pigmented nevi which do not contain nevus cells and which comprise acanthotic and keratotic nevi (essentially pigmented papillomata) and benign cystic epithelioma. This group is much less potential of malignant change. Moreover, when such occurs, squamous cell epithelioma results, which is generally less grave than malignant melanoma.

The melanoma, in its quiescent form, is related to a congenital abnormality which consists of an overgrowth and pigmentation of the epidermis with specific cells, the so-called nevus cells embedded in nests and columns in the dermis.

The quiescent benign forms are known as moles and represented clinically as pigmented spots of variable size, or as nodular warts, pedunculated, papillary lesions (figs. 7 and 8) which are soft, compressible, and often wrinkled, like raisins (soft moles or nevi), or linear (nevus unius lateralis) or diffuse (giant nevi) of the bathing-trunk type. They frequently contain hair (figs. 8 and 9). The considerably less grave pigmented nevi, the acanthotic and keratotic nonnevus cell tumor, essentially the pigmented papillomata, are clinically irregular, finely nodular, warty masses (fig. 11), with a pedicle or with a broad base, single or multiple, or are flat lesions with a rough, finely granular, papillary, often furry surface. They are of hard consistency (so-called hard moles or nevi) because of the thickening of the prickle or horny layer. They never contain hair. The nevus cell tumor is about four times more frequent than the nonnevus cell. Figure 12 is a diagrammatic presentation of the classification of the benign cutaneous melanomata.

Fig. 5. An angioma cavernosum on a baby, aged 6 months. Five sub-erythema doses of gamma rays of radium were applied during a period of ten months.

Fig. 6. Result seven months after last treatment. A faint purple area remained at the site of treated area; no scar and no bald spot.

Malignant melanomata may arise from any of the nevus cell growths (figs. 7, 8, and 9) and from the so-called blue nevus which is a nonnevus cell tumor. This change may occur spontaneously, following pregnancy, or after trauma.

It is significant that in cases in which malignant change has occurred, there is frequently a history of trauma incident to mechanical irritation (fig. 13), the application of caustics, tying a string around the lesion, or other imperfect at-

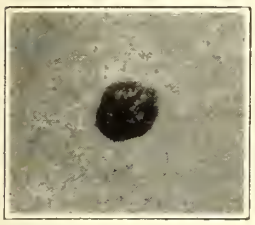

Fig. 7. A common variety of soft mole. It was elevated, pigmented, and had a papillomatous surface. This type of mole is a potential malignant melanoma. The danger of irritative treatment is discussed in the text. It was removed by electrodesiccation. The resulting scar was negligible. Histologically it was a nevus cell tumor.

Fig. 8. A pigmented, hairy nevus with considerable involvement of ear and scalp. The limitation of roentgen ray and radium in treatment of this type of nevus is discussed in text. Destruction by electrodesiccation is the only desirable means of treatment.

tempts at removal. Mention may here be made of a patient who was struck on the temple with a baseball at the site of a black mole. At this site a malignant melanoma appeared which resulted in the death of the patient. In Dawson's patient,[1] repeated scratching of the surface of a macular nevus on the forehead led to malignant change.

The danger of malignancy developing is much greater if the nevi are located in areas in which they are subjected to irritation from opposing surfaces of the skin, clothes, eyeglasses, razor, or shoes, or if picked or handled by the patient. Dangerous places are the heel, the costal margins, face and ear, and the nails (melanotic whitlow). The danger of malignancy appears also to be in proportion to the amount of pigment the nevi contain. Coal-black, bluish-black, or slate-colored moles are much more hazardous than the slightly-pigmented yellowish or brownish mole.

Benign melanomata are extremely common. Malignant melanomata are fortunately much less common. Lubarsch[2] quotes Folger's statistics of 2274 malignant tumors in 18,113 cadavers, twenty (0.89 per cent) were melanotic. Since malignant change, however, is potential, it becomes prudent to routinely destroy all pigmented nevi. Such destruction is particularly indicated if the lesion is subjected to trauma. This statement should include the less hazardous group of yellowish or brownish moles and the hard moles or nonnevus cell tumors—pigmented papillomata. If there is evidence of beginning malignancy, it becomes imperative to thoroughly destroy the lesion.

The earliest symptoms of a malignant melanoma are enlargement, ulceration, increase of pigmentation, bleeding, or the appearance of subcutaneous nodules. (See following case record and fig. 13.) A discharging sore or bluish discoloration may follow an injury, or the mole may gradually increase in size and then break down. The discharging sore may heal only to break down in a short time. Ewing and others have emphasized the apparently innocent histologic and clinical characters of certain moles which have given rise to metastasis. The primary lesion may be only slightly pigmented with no increase. Indeed, the enlarged glands may be the first conspicious symptoms, the primary lesion being so small that it is overlooked. In Horwitz's[3] patient, the first symptoms were generalized cutaneous nodules and enlarged inguinal nodes which appeared three years after a surgical excision of a small mole on the leg. There was no recurrence at the healed scar.

The following case records concern the change from benign melanoma to malignant and illustrate how rapidly or how slowly generalized metastasis occurs.

Negro, aged 45 years, since boyhood had a black spot on the heel. In March, it became larger and raised. Later, ulceration developed. In about three months it

Fig. 9. A pigmented, hairy nevus. Clinically it was a nevus cell tumor type of nevus, a potential malignant melanoma. It was destroyed by electrodesiccation under gas anesthesia in one operation.

Fig. 10. Final result, about one year after destruction. The scar was soft and flesh colored. After healing of the operative area, the thickened scar was treated with filtered roentgen ray.

had reached the size of a dollar. In June, subcutaneous nodules appeared on the forearms. Histologic examination of one of these nodules showed melanoma-carcinoma. In July, the cutaneous nodules disseminated. The patient died in December.

Woman, aged 57, had a pigmented patch on the waistline since birth. It had been irritated by clothes and by scratching. Two years ago it became raised and bled. Ten months later, the patient sought initial treatment. This consisted of weekly painting with silver nitrate for two months. Subsequent treatment consisted of burning

the lesion with some liquid. Later, radium was applied. Twenty-two months after the initial symptoms, swelling appeared in the axillæ. The patient presented a deeply pigmented raised patch containing pigmented nodules (fig. 13), enlarged glands in the axillæ, with evidence of metastasis. The patient died thirty-two months after the appearance of the first signs of malignancy.

Malignancy developing in hard moles, the nonnevus cell tumor, or pigmented papillomata (fig. 11), is rather uncommon. Irritation of these lesions is much less hazardous than in the case of the nevus cell tumor. When malignancy develops, however, it is the metastatic type—squamous cell epithelioma. Early diagnosis is, therefore, important. The earliest symptoms are essentially ulceration and the character of the edge, which is curled, so-called pearly, and typical of cutaneous epithelioma.

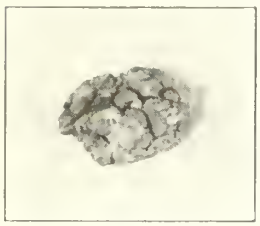

Fig. 11. A hard mole less common than the soft type. This type is less potential of malignant change. When such change occurs, squamous cell epithelioma results. It was removed by electrodesiccation. Histologically it was a papilloma, a non-nevus cell tumor.

Danger of Insufficient Treatment of Premalignant Nevi

Destruction of these benign melanomata (potentially malignant), should be thorough and complete and performed at one operation, in which cosmetic results are secondary. Destruction should include healthy tissue surrounding and below the lesion.

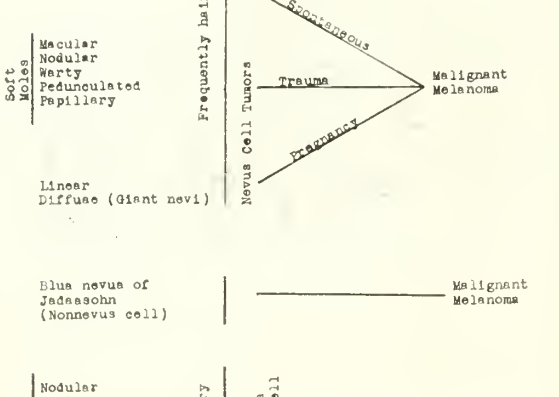

Fig. 12. Classification of benign cutaneous melanomata and transition to malignancy.

For reasons already discussed, roentgen ray and radium should not be employed in the destruction of these lesions. There is a growing opinion against the procedure of surgical excision. I regard thermocautery as not sufficiently thorough. Complete destruction can best be accomplished by electrodesiccation. To treat these lesions by painting with acids, by applying carbon dioxid snow, by electrolysis, by tying a string around a pedunculated lesion, by incomplete excision, or by any treatment applied at intervals is a dangerous procedure. Such treatment is pernicious, constitutes irritation and makes malignant change potential. I have seen patients in whom the pigmented nevi were so treated and the lesions became malignant with metastasis and death. In the propaganda for the control of cancer this injudicious treatment should be condemned with all the emphasis at one's command.

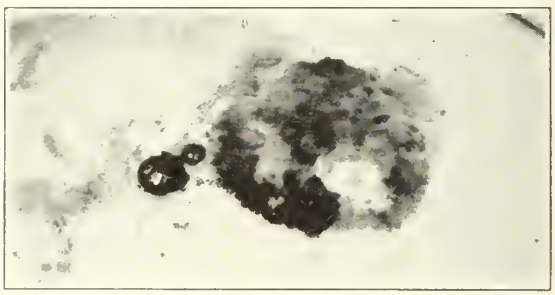

Fig. 13. A malignant melanoma. (See text, p. 475.) It was deeply pigmented and elevated. Its surface was studded with black nodules. It appeared at the site of a pigmented patch which existed since birth. It was irritated by clothes and by scratching. Two years ago the first symptoms of malignancy appeared, which were enlargement, increase of pigmentation, and bleeding. The patient died as a result of metastasis thirty-two months after the first symptoms of malignancy.

The hazard of insufficient treatment applies most forcibly to soft nevi, nevus-cell tumors, potential malignant melanomata, and considerably less forcibly to hard nevi nonnevus cell tumors.

The treatment of malignant melanomata is beyond the scope of this paper and will therefore not be discussed.

1934 Spruce Street.

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1. Dawson.—"Classification Based on Clinical and Histologic Appearance." *Edinburg M. J.*, p. 32, 1925.

2. Lubarsch, D.—"Zur Vergleichenden Pathologie der Melanotischen Gewachse." *Med. Klin.*, 16: 195-99, 1920.

3. Horwitz, A.—"Melanotic Tumors." *Ann. Surg.*, 87: 917-33, 1928.

ABSTRACT OF DISCUSSION

Fred D. Weidman, M.D. (Philadelphia, Pa.): Nevi are matters of great concern on the whole, more from the cosmetic than from the standpoint of life or death. Perhaps the high point of Dr. Klauder's paper is the advertisement here of what I dare say to the medical rank and file is a new thing—the electrocoagulating current, which has almost revolutionized cosmetic dermatology. I am not quite clear as to the most effective means of preventing secondary infection after using this

modality. I know that in some hands some dyes, such as gentian violet, are used routinely.

Dr. Klauder (in closing): I believe any conventional local antiseptic, as a compress, is preferable to the dyes. I do not use the dyes. My preference is mercuophen solution employed as a compress.

PROGRAM OF THE PHILADELPHIA HEART ASSOCIATION

An intensive demonstration in the diagnosis and treatment of heart disease will be given again this year by the Philadelphia Heart Association, from May 19 to 22, inclusive.

Physicians interested in attending this demonstration will please notify Miss Helen E. Heikes, the executive secretary, 311 S. Juniper Street, Philadelphia, Pa. There is no charge for this demonstration. The following is a tentative program:

Monday, May 19, 1930

(Daylight Saving Time)

Time: 9 to 10 a. m.
Speaker: Ross V. Patterson, M.D., dean, Jefferson Medical College.
Subject: "A Rational Plan for the Diagnosis and Treatment of Heart Affections."
Place: Jefferson Hospital (Clinical Amphitheater), 10th and Sansom Streets.

Time: 10 to 11 a. m.
Speaker: Thomas Magee McCrae, M.D., professor of practice of medicine and clinical medicine, Jefferson Medical College.
Subject: "Discussion, Syphilis of the Heart."
Place: Jefferson Hospital (Clinical Amphitheater), 10th and Sansom Streets.

Time: 11 to 12 m.
Speaker: Henry K. Mohler, M.D., associate in medicine, Jefferson Medical College.
Subject: "Heart Block."
Place: Jefferson Hospital (Clinical Amphitheater), 10th and Sansom Streets.

Time: 12 to 1 p. m.
Speaker: Elmer H. Funk, M.D., clinical professor of medicine and therapeutics, Jefferson Medical College.
Subject: "Acute Endocarditis."
Place: Jefferson Hospital (Clinical Amphitheater), 10th and Sansom Streets.

Time: 2 to 3 p. m.
Speaker: Hobart A. Hare, M.D., professor of therapeutics, materia medica and diagnosis, Jefferson Medical College.
Subject: "Medical Treatment of the Heart."
Place: Jefferson Hospital (Clinical Amphitheatre), 10th and Sansom Streets.

Time: 3 to 4 p. m.
Speaker: Edward Weiss, M.D., demonstrator of clinical medicine, Jefferson Medical College.
Subject: "Congenital Heart Disease."
Place: Jefferson Hospital (Clinical Amphitheatre), 10th and Sansom Streets.

Time: 4 to 6 p. m.
Speaker: William D. Stroud, M.D., associate professor in cardiology, Graduate School of Medicine, U. of P. Demonstration of Children's Heart Clinic.
Place: Pennsylvania Hospital, 8th and Spruce Streets.

Tuesday, May 20, 1930

Time: 9 to 11 a. m.
Speakers: Eugene Prendergass, M.D., instructor of radiology, U. of P. Medical School, E. B. Krumbhaar, M.D., professor of pathology, U. of P. Medical School, and associates.
Subject: "Combined Demonstration of Pathologic Specimens and X-ray Films of the Common Cardiovascular Abnormalities."
Place: Department of Pathology, U. of P. Laboratory, 36th and Hamilton Walk (1 block south of Spruce Street).

Time: 11 to 12 m.
Speaker: A. M. Richards, M.D., professor of pharmacology, U. of P.
Subject: "Action of Certain Drugs on the Heart."
Place: U. of P. Medical Laboratory, 36th and Hamilton Walk (1 block south of Spruce Street).

Time: 12 to 1 p. m.
Speaker: H. C. Bazett, M.D., professor of physiology, U. of P.
Subject: "Physiology of the Heart."
Place: U. of P. Laboratory, 36th and Hamilton Walk.

Time: 2 to 3.30 p. m.
Speaker: John Eiman, M.D., pathologist, Presbyterian Hospital.
Subject: "Anatomy of the Conducting System with Demonstration of Injection of the Purkinje System and Demonstration of Injection of Coronary System."
Place: Presbyterian Hospital, 39th and Filbert Streets.

Time: 4.00 p. m.
Visit to Children's Heart Hospital.
Motors will meet physicians at Presbyterian Hospital.

Wednesday, May 21, 1930

Time: 9 to 10 a. m.
Speaker: William D. Stroud, M.D., associate professor in cardiology, Graduate School of Medicine, U. of P.
Subject: "Treatment of Cardiac Arrhythmia."
Place: Pennsylvania Hospital, 8th and Spruce Streets.

Time: 10 to 11 a. m.
Speaker: George W. Norris, M.D., professor of clinical medicine, U. of P.
Subject: "Physical Examination of Heart."
Place: Pennsylvania Hospital, 8th and Spruce Streets.

Time: 11 to 12 m.
Speaker: Miss Helen E. Heikes, executive secretary, Philadelphia Heart Association.
Subject: "Program of American Heart Association for Prevention and Relief of Heart Disease."
Speaker: Miss Mabel E. Crafts, employment secretary, Philadelphia Health Council.
Subject: "Employment for the Cardiac."
Place: Pennsylvania Hospital (Library), 8th and Spruce Streets.

Time: 12 to 1 p. m.
Speaker: James E. Talley, M.D., professor of cardiology, Graduate School of Medicine, U. of P.
Subject: "Hypertensive Heart Disease."
Place: Pennsylvania Hospital, 8th and Spruce Streets.

Time: 2 to 4 p. m.
Speakers: S. Calvin Smith, M. D., associate professor of cardiology, Graduate School of Medicine, U. of P.; Thomas M. McMillan, M.D., associate professor in cardiology, Graduate School of Medicine, U. of P.
Subject: "Demonstration and Discussion of Electrocardiology in Diagnosis and Treatment of Heart Disease."
Place: Philadelphia General Hospital, 34th and Pine Streets.

Time: 4 to 5 p. m.
Speaker: Wm. E. Robertson, M.D., professor of practice of medicine, Temple University.
Subject: "Coronary Disease and Angina Pectoris."
Place: Clinic of Philadelphia General Hospital, 34th and Pine Streets.

Thursday, May 22, 1930

Time: 9 to 1 p. m.
Series of Short Demonstrations.
Speaker: Alfred Stengel, M.D., professor of practice of medicine, U. of P.
Subject: To be announced.
Speaker: Edward Rose, M.D., instructor of medicine, U. of P.
Subject: "Relation of the Thyroid to the Heart."
Speaker: Richard Kern, M.D., associate in medicine, U. of P.
Subject: "Relation of Asthma and Emphysema to Heart Disease."
Speaker: Truman Schnabel, M.D., associate in medicine, U. of P.
Subject: "Relation of a General Dispensary to a Cardiac Clinic."
Speaker: George P. Müller, M.D., professor of clinical surgery, U. of P.
Subject: "Surgery in Heart Disease."
Speaker: Francis Wood, M.D., Fellow of the Robinette Foundation.
Subject: "Electrocardiographic Changes, Angina Pectoris, Coronary Artery Disease."
Speaker: Alexander Margolis, M.D., Fellow of the Robinette Foundation.
Subject: "Reduplicated Heart Sounds and Gallop Rhythm."
Place: University Hospital (Sun Parlor—Pepper Ward), 34th and Spruce Streets.

Time: 2 to 3 p. m.
Speaker: J. C. Small, M.D.
Subject: "Rheumatic Heart Disease."
Place: Laboratory, Philadelphia General Hospital, 34th and Pine Streets.

Time: 3 to 4 p. m.
Speaker: David Riesman, M.D., professor of clinical medicine, U. of P.
Subject: "Myocardial Weakness Commonly Called Myocarditis."
Place: Philadelphia General Hospital, 34th and Pine Streets.

Time: 4 to 5 p. m.
Speaker: Charles C. Wolferth, M.D., associate in medicine, U. of P.
Subject: "Aortitis, Aortic Aneurysm, and Aortic Insufficiency."
Place: Clinic, Philadelphia General Hospital, 34th and Pine Streets.

Time: 7 to 9 p. m.
Speaker: Wm. D. Stroud, M.D., associate professor in cardiology, Graduate School of Medicine, U. of P., and Thomas M. McMillan, M.D., associate professor in cardiology, Graduate School of Medicine, U. of P. Demonstration of Adult Heart Clinic.*
Place: Pennsylvania Hospital, 8th and Spruce Streets.

Birth Control in Maternal Clinic in Delaware County

Birth control is no longer an academic subject, but an accomplished fact, in Philadelphia and environs. A clinic, supported by a group of widely known physicians and welfare workers, has been disseminating birth control information for more than a year. It was founded by the Maternal Health Committee. It is located in a suite of rooms in the McClatchy Building, Sixty-ninth and Market streets, just across the Philadelphia city line in Delaware County. Eighteen social service agencies of Philadelphia and vicinity and two public health nursing organizations are actively coöperating with the clinic.

Among its chief supporters is Dr. Jay F. Schamberg, president-elect of the Philadelphia County Medical Society. The Maternal Health Committee is headed by Dr. A. Lovett Dewees, attending physician to Bryn Mawr Hospital and secretary of the Main Line branch of the Montgomery County Medical Society. Other members are Mrs. Louis N. Robinson, Swarthmore, wife of the well-known penologist; Miss Anna W. Pennypacker, daughter of former Governor Pennypacker; Mrs. Jay F. Schamberg and Mrs. Stuart Mudd, wife of Dr. Mudd, of the University of Pennsylvania Medical School. The advisory committee is composed of Stevens Heckscher, Attorney David Wallerstein, Dr. Schamberg, Dr. Mudd, Dr. Joseph Stokes, Jr., Dr. H. R. M. Landis, and Dr. G. Victor Janvier.

"Since opening our doors in 1928," Dr. Dewees said, "more than 140 patients have been received at the dispensary. Many of them were suffering with tuberculosis, marked anemia, disease of heart or kidneys, persistent miscarriages, defective mentality, and other forms of ill health." He explained that the vast majority of the clinic patients were sent there by the nineteen representative welfare organizations in Philadelphia. "When you consider that the average family income of our patients is only $28 a week," continued Dr. Dewees, "the average number of pregnancies per family is five, and about half the patients have had miscarriages, you will realize the extent of the social problem confronting us. There came a real need for a maternal clinic." The work of the clinic has included painstaking research and a careful follow-up of cases treated. "We have demonstrated conclusively," Dr. Dewees resumes, "that in many of these families, the nervous, mental, and physical health of both parents improved, in great measure, after the clinic had strongly advised against unwise practices."

The Maternal Health Clinic is altruistic in its aims. The type of patient advised and treated is comparable to the average case in the usual hospital dispensary. No charge is made, except in cases where the patients obviously can afford to pay a nominal fee. Not only is a large group of welfare organizations coöperating actively with the clinic, but the work has been tacitly approved by two church federations.—*Philadelphia Record.*

* It is our hope and intention to have each man see at least one heart clinic in operation.

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Editorials

MAY DAY—CHILD HEALTH DAY

Seven years ago the American Child Health Association conceived the idea of May Day—Health Day and each year since then that organization has beckoned all health workers toward a well-chosen goal. Moreover, it has most generously aided other organizations all over the country in working out ambitious plans. With conviction may it be said that a recurrence of the spring health celebration is now becoming firmly entrenched in the minds of health workers everywhere and it calls afresh to the organized medical profession to interest themselves professionally and personally in all the plans.

The keynote for 1930 is "Parent Coöperation in Community Child Health and Protection"—a most timely topic for emphasis.

More factors than ever before are fostering the popular understanding of the physical attention which should be given to the child.

Never have physicians been able to give such sure advice in the common matters of child health habits as now, because of the vast accumulation of actual experiences in caring for thousands upon thousands of children after the modern manner.

Pertinent questions which we may well ask ourselves are these: Is the public becoming actually better informed in the current events of the child health world? Is the education of parents progressing at any better speed as each year goes by? Are we securing a better response to the doctors' admonitions to have physical examinations made? Are more parents taking action on the findings?

We talk, we write, we broadcast health stuff. Whole magazines, the daily press, the Sunday special, leaders and news items, and even the "colyums" and the advertisements take up the refrain. Everything helps to swell the chorus, but after all, in generating parental coöperation, the voice of the doctor has the greatest weight with the listening parent.

Under the guidance of the Department of Health, the Pennsylvania May Day plans again place first on the list of suggestions for celebrations the need for community-wide and county-wide work for the preschool child.

The *unnecessary* threat of illness, and the *unnecessary* handicaps which stop short of illness should be lifted from thousands of prospective first-graders this spring. Along with every other agency active in the May drive, doctors will doubtless do their part.

TRISTATE MEDICAL CONFERENCE

In this number of the Journal appears the report of the Tristate Medical Conference held in New York City, February 8. The program was devoted to the discussion of a very valuable subject to the medical profession, viz., "How Can the Medical Profession, Through Its Units, Most Effectively Coöperate in Promoting the Modern Lay Public Health Program." We would urge our members to read carefully this report which continues to remind the physician that preventive medicine is slowly but surely replacing curative medicine and that the physician must fit in the general scheme.

As stressed by one of the speakers, Dr. Walter F. Donaldson, the agencies that are interested in the public health program should bear in mind that persons who are able to pay for vaccination, diphtheria immunization, and similar procedures should be referred to a physician, and not given free attention. There is too much of the latter being done, through carelessness and thoughtlessness on the part of overzealous health workers.

On the other hand, the medical profession should be keenly alert to modern methods, and be prepared to render service when persons apply, who are able and willing to pay. In many instances physicians in a community have been noncoöperative, even when the applicants were able to pay, and under these circumstances health workers have recommended and even taken the persons where such service would be rendered free of charge.

We have urged on numerous occasions the necessity for the various county medical societies to realize the need for their initiation of a program of lay education and to control or guide all public health matters in their respective counties. We can do no more. Many of the medical societies of our State are content to allow their community to be instructed as well as possible by our State Department of Health. But, the secretary of our State Department of Health, Dr. Theodore B. Appel, states: "The county medical society should regain the position it once occupied, to provide health data and advice in all local situations." This sage admonition from our State secretary of health should arouse the county medical society from its lethargy.

THE ANNUAL REGISTRATION FEE

The Pennsylvania State Legislature in common with the legislature of other states, persists in passing laws without making monetary provision for their enforcement. One of these is our Medical Practice Act.

In order to obtain revenue, with which to prosecute the illegal practitioner, it was deemed expedient to have our State Legislature pass a law requiring all physicians who are registered in the State to pay an annual registration fee of one dollar. Our State Medical Society was in hearty accord with the proposed legislation, on account of its laudable purpose. According to the law all physicians, drugless therapists, physical therapists, and chiropodists coming under control of the Board of Medical Education and Licensure must meet the requirements of annual registration. The osteopaths, under the control of their own Board, pay an annual registration fee of five dollars. This law became effective January 1, 1926.

The question has frequently been asked, by the medical profession of the State, as to what are the activities of the Board of Medical Education and Licensure in the use of this fund in prosecuting the illegal practitioners. Many of our physicians do not believe that the Board is exercising its police powers to the fullest possible extent that it should.

The *Clearfield County Medical Society Bulletin* for March, in an article on the Baker Case, makes the following statements:

"Quite an interest was manifested at the last court session, when Mr. S. E. Baker of Osceola Mills was tried for attempted abortion. . . . Baker swore he did not do it. The jury believed Baker and acquitted him. Baker had previously pled guilty to the charge of practicing medicine without a license on the advice of counsel. . . . Judge Chase in sentencing him told him that the maximum sentence for violating the Medical Practice Act was a $500 fine and six months in jail, but because of his advanced years, and having never been before the court on a similar charge, he would sentence him to pay the costs of prosecution and $300 fine, and the jail sentence would be suspended provided that he kept free from violation of the law for the next two years, and if he did not, he would be brought into court and the maximum sentence applied. . . . According to Baker's statement, he had practiced in Osceola Mills for twenty-five years unmolested, which is probably true, but would not be if the Board at Harrisburg had done its duty. He has been reported a number of times by various members of the Society, but the reports were always ignored, and it was with great difficulty that they took up his case this time. Two years ago an effort was made to get the Board interested in prosecuting a chiropractor, and no attention was given until the Board received a formal report from the County Medical Society. In the Baker case the same trouble was encountered and the aid of a State Senator was the only means by which they could be awakened up."

The Board makes a statement herewith for the benefit of the medical profession of the State, under the title "Enforcement for Pennsylvania."

ENFORCEMENT FOR PENNSYLVANIA

The Board of Medical Education and Licensure feels that the physicians in Pennsylvania might be interested in a report of the work done in recent years in enforcement of the Medical Practice Act in this State, by the Board and its investigators.

Every complaint that has been made whether by mail, telephone, or in person, even some anonymous complaints have been investigated; very many of them, especially in Philadelphia, have not amounted to much. Others have been of such a nature that no prosecutions could be made; others have resulted in arrest and prosecution, and most of these in conviction followed by fine or jail term, or both.

Any exhaustive campaign against unlicensed cultists has been impossible, on account of limited amount of funds available; this being especially true in Pittsburgh and Philadelphia; while in other small communities much has been accomplished in reducing the number of such unlicensed practitioners.

In June, 1929, an injunction was asked for in the Courts of Allegheny County, by the Chiropractor Association of the State to restrain the Board from making prosecutions against unlicensed chiropractors, the claim being made that they have a property right in their practice. The case was argued in October, and a decision has not yet been handed down (January 21, 1930). This action has impeded prosecution in as much as the legal authorities throughout the State are induced by defendants to await the decision of the Allegheny County Court before prosecutions are made. This has been especially so in the western and central counties.

Since writing this report, the Court of Common Pleas of Allegheny County, has denied the injunction asked by the Chiropractor Association. This will very likely act as a boomerang to the chiropractors in future prosecutions, because in the decision of the Court, the position of the Pennsylvania Board of Medical Education and Licensure is legally upheld in its right to formulate regulations for licensure of limited practitioners, and definitely upheld the former decision of various courts that the practice of chiropractic is the practice of medicine.

Lack of coöperation in the district attorney's office has interfered with successful prosecution in some counties; and lack of coöperation by some County Medical Societies, has also increased the difficulties.

At present a chiropractor is being held by court in Braddock County; in Westmoreland County, four continued cases are awaiting trial; in Beaver County, a neuropath is a defendant; in McKean County, a domineering chairman of the Grand Jury, a Methodist minister, openly championed the rights of chiropractors, and three arrested cases had to be withdrawn and held over for a subsequent jury; while in Allegheny County two cases are pending.

In Philadelphia, the Board has proper coöperation from the office of the District Attorney. Over fifty cases have been investigated, the District Attorney's office having assisted in about thirty of these. These cases have ranged from men charged with abortion; venereal quackery; patent-medicine quackery, but many of these latter do venereal quackery on the side and are hard to trap; unlicensed cancer specialists; nursing homes; so-called health institutes; physiotherapists alleged to be practicing medicine, these overstepping their license privileges; naturopaths; zone-therapists; pathologic laboratories overstepping their rights; clinics run by unlicensed men; opticians alleged to be practicing medicine; and men supposed to be practicing medicine without a license.

Some of these cases did not prove to be as alleged in the complaints, some really were licensed but unethical, and, therefore, not under our jurisdiction. A number were driven out of business and out of Philadelphia by threats of arrest; others changed their method of advertising. The Board was quite successful in having some offenders brought to the office of the District Attorney, and on being threatened with arrest, entirely quit their improper work.

One case, unfortunately, was acquitted by the jury, even after the charge of the trial judge was for conviction, after the arrested man had been in jail six weeks under heavy bail. One noted zone-therapist was driven out of the city; an abortionist got from five to ten years in jail; a naturopath had a verdict of eight-thousand dollars worth of damages against him; a colored preacher had a sentence of three months and five-hundred dollars fine; a naturopath is serving a jail sentence of eight months; another skipped his bail of five-hundred dollars. Many other cases are still under investigation.

In a dozen counties there have been thirty-five prosecutions of persons engaged in illegal practice. Of this number there were according to our information twenty-two convictions including those who plead guilty. In one county, three were arrested and a true bill was secured, but when the cases came to trial, the court squashed the indictment. In another county, nine persons were prosecuted on summary conviction and fined by the magistrate; the cases were appealed and dismissed by the court. In another county seven were prosecuted; the district attorney showing very little interest in the prosecution and dismissed the case claiming insufficient evidence. Especially has work been done in Lycoming, Lancaster, Berks, Fayette, Butler, and Somerset Counties.

In addition to the persons arrested, nearly two hundred individual cases were reported to the Board at Harrisburg by physicians, representatives of other professions, state officials, and nonprofessional persons. Most of these have already been investigated and reported upon.

It may be of interest to complainants against alleged illegal practitioners to know just what has to be done to secure results; threats of arrest after proof of nonlicensure are at times effective; but when not, they defeat their object by warning the offenders; to arrest and prosecute without sufficient evidence is futile and even reactionary on general results.

To obtain a conviction by prosecution requires three things: evidence by at least two persons who have had the service of the offender, an examination made, a diagnosis made or sug-

gested, and some form of treatment given, whether a personal prescription or a written prescription to be filled at a drug store, surgery or electric treatment, and also a fee paid to the offender. All this is quite necessary with days and dates and amount.

The Board has sought the coöperation of detective bureaus and of district attorneys with varying results in different counties. The Board is most anxious for the fullest coöperation of the County Medical Societies and of all individual physicians.

Furthermore, in as much as the work of the Board also has to do with the administration of midwifery, investigations have been made of midwives who have been practicing without licenses in various counties in the western and central part of the State.

An appeal to the higher courts, however, is threatened, if not already made by the chiropractors. This will continue as a hindrance in the prosecution of cases in the various courts, especially such courts as may welcome an opportunity to side-step such responsibilities.

WILLIAM HOWARD TAFT

William Howard Taft, statesman, patriot, former president and former chief justice, passed away at 5.15 p. m., March 8, aged 73. No other man in our history held both of these offices.

Mr. Taft was known as the "Apostle of Cheer," and radiated sunshine with his famed smile. A beautiful part of his philosophy of life was "never worry." It must have been of inestimable value and comfort to him, for he had more than his share of troubles, especially during his occupancy of the White House.

His glowing human qualities seemed to make all his countrymen his kin.

He was big in mind and big in body. In the truest sense his was the "judicial mind." His whole life constituted an inspiration for all American youths with worthy aspirations.

Mr. Taft, when president, honored the Medical Club of Philadelphia, May 4, 1911, by being its guest. In the address delivered at that time he paid a wonderful tribute to the achievements of the medical corps of the Army and Navy.

Dr. Stewart L. Rodman was president of the Club that year, and presided at the dinner. The following were some of the guests; Senator Boies Penrose, ex-Minister to Italy William Potter, Rev. Dr. Russell H. Conwell, Drs. S. Weir Mitchell and William H. Welch (Baltimore, Md.), and Cyrus H. K. Curtis.

MEDICAL HISTORY OF WASHINGTON COUNTY MEDICAL SOCIETY

We are in hearty accord with any and all efforts being made by any of our component county medical societies in regard to preparing a history of the medical activities of their respective county. This is a most worthy project, and every county in the State that has not already done so should engage in this most laudable enterprise. The few county societies which have done so must bear in mind that from time to time they should bring their medical history up-to-date.

The Medical Program, the official publication of the Washington County Medical Society, announces in its issue of February 1, that a history of the Washington County Medical Society is being prepared, and every member of the society is requested to furnish certain information, which information constitutes a questionnaire that has been sent out by the committee. The members are requested to fill in the questionnaire and forward it to Dr. C. C. Cracraft, Secretary, Lock Box 266, Claysville, Pa. The secretary will edit and prepare the manuscript for the history.

The data requested are as follows: Place and date of birth; early education; higher education, academy, normal, and college; early occupation, as school-teacher, college, etc; medical college and date of graduation; internship; hospital service or appointments; teaching in medical college; locations for practice; offices held in medical societies; World War services, place, rank; political offices held; and any other information the member desires to give.

If any other societies (county medical) anticipate assembling a medical history, this questionnaire may give them a thought.

It may be possible that there are some of our members who were formerly located in Washington County and are now engaged in practice elsewhere, or retired from practice, and are no longer living in Washington County. We would urge these practitioners to communicate with the secretary of the Washington County Medical Society, because any information they may give will be of inestimable value in properly assembling the medical history of Washington County.

If our readers have any facts of interest regarding the medical activities of Washington County, we feel certain it will be a great help if they will forward all such information to the secretary of the Washington County Medical Society.

MENTAL HYGIENE AND THE INTERNIST

When one considers that twenty-five per cent, and possibly more, of the internist's patients are neurotics and psychoneurotics, per se, or that neuropsychiatric symptoms are the prevailing symptoms met within such a percentage, one should be forcibly struck with the very close relationship of internal medicine to mental hygiene.

Many internists are cognizant of the mental picture presented by the mental patient, per se, in contrast to those of the neurotic and psychoneurotic, as well as those psychoneurotic manifestations which are associated conditions of the physical disease from which the patient suffers. Cases seen by the internist usually fall into: (a) arrested developments; (b) frank psychoses without physical diseases; (c) psychosis dependent on physical diseases; and (d), neurotic and psychoneurotics either as an entity or as a part of the physical picture. The internist may also be the first to come in contact with problem children.

The method of approach most acceptable is for the internist to study his patient, regardless of the mental picture, for the presence or absence of neurologic, physical, chemical, and pathologic findings; for foci of infection; glandular disturbances or diseases of accessory sinuses. Positive factors, regardless of how trivial, bear a dependable relationship to the patient's psychic reactions and should never be lost sight of in handling the case. Along with the program of physical and medical régime in these cases should also be included a mental health régime.

In those patients in whom no physical factors are found, it behooves the physician to search the etiologic field further as to possible heredity and environmental factors, personality, conflicts, etc. In the event the internist finds such endeavor too time consuming, it is his duty to the patient to refer him to a psychiatrist or to a mental clinic. We should all guard against telling the patient: "You are only nervous. I can do nothing further for you," thus starting him on his endless journey from doctor to doctor, without relief.

The internist will lend a great impetus to mental hygiene if he will remember that a patient's mental condition in any illness is as much at stake as his physical health and should not be lost sight of in his régime of treatment.

JOTS AND TITTLES

Research and Discovery

The method of treating child victims of burns by using tannic acid, devised by Dr. Edward C. Davidson of Detroit, has reduced the mortality from burns to about one-quarter of that observed previously. As burns in children are especially apt to be fatal, these figures are gratifying. The tannic acid solution is sprayed hourly on the burned areas, which have first been cleaned. No dressings are used, and the burned area is dried, after spraying, in hot air under a bed-cage.

In reviewing 500 consecutive cases of indigestion or abdominal distress, Dr. Walter C. Alvarez, of the Mayo Clinic, could demonstrate actual disease of the stomach in only 12. Dr. Alvarez stated: "As Dr. W. J. Mayo long ago pointed out, the stomach often serves as a fire box to call attention to a conflagration elsewhere in the body. In many of these patients the fire was far away, in the brain, the teeth, the thyroid, lung, heart, spine, kidney, bladder, uterus, or blood vessels."

It is stated by Dr. Andy Hall, director of the Department of Health of Illinois, that injection of the blood of a parent into a child who has been exposed to measles wil save an average of three hundred lives annually in Illinois. Dr. Hall claims that since practically all parents have had measles, there is a substance in their blood that permanently protects them from a second attack. This treatment will not prevent measles entirely but it will cause the disease to run a mild course, resulting in permanent immunity.

The Bureau of Fisheries of the Department of Commerce has demonstrated that canned salmon contains the preventive factor for pellagra and has given evidence that blacktongue of dogs is the analogue of pellagra in man. A test of the value of canned salmon as a preventive of pellagra was organized at the Georgia State Sanitarium. Mr. Bower, administrative officer of the Bureau of Fisheries, claims that increased use of fish would add materially to the physical well-being of most people because of the presence of rich vitamins and easily assimilable mineral constituents.

Demands Pledges of Aid to Veterans

The declaration that by either deliberate attempt or sheer negligence the welfare of the ex-service men and women in Pennsylvania has been disregarded by the State delegation in Congress was made March 5 by Dr. John A. Farrell, of West Chester, chairman of the Disabled Soldiers' Medical Aid Committee of the Department of Pennsylvania of the American Legion. Dr. Farrell, who is a member of the Bernard Schlegel Post, of West Chester, and who succeeds Dr. Henry A. Pleasants, of Paoli, in the important medical aid committee, intimated the various political parties in the State have deliberately kept World War veterans, both men and women, in a position of political mediocrity.

As a result of the feeling of resentment which, he said, is growing in the minds of all ex-service men of the State, regardless what veterans' organization affiliation they may have, a united demand is to be made of the gubernatorial candidates in coming primaries that they support a measure which twice has been vetoed by Governor Fisher. The bill, which was vetoed once in 1927 and again in 1929, would permit any honorably discharged soldier, sailor, or marine to be committed, at the expense of the State, to any hospital, almshouse, or similar institution in Pennsylvania which receives State aid through the Department of Welfare. Pennsylvania has but forty-seven per cent hospitalization for its ex-service men, as against eighty-eight for New York and eighty-two for Illinois, the other two states having the largest veteran populations.

Dr. Farrell's committee will demand, and hopes to

secure from Congress, a new tuberculosis hospital in Philadelphia; the establishing of the present Veterans' Bureau Hospital No. 49 as a diagnostic center exclusively, and an increase in 500 beds for the new hospital at Coatesville, now containing 500 beds, is about sixty per cent complete.

Scientists Study Iodin's New Uses

The Mellon Institute, Pittsburgh, has announced new activities of its Iodin Fellowship, which was established two years ago for the purpose of investigating chemical phases of proposed applications of this element. These new projects, which are of special importance in the fields of animal husbandry and medicine, will be carried on at the Pennsylvania State College and the Philadelphia College of Pharmacy and Science. The possibility of extending the utility of the element in food, medicine, and agriculture, as well as in chemical technology, led the Iodin Educational Bureau to establish a multiple industrial fellowship at the Mellon Institute of Industrial Research. This fellowship, founded two years ago, has as its objects the study of proposed technologic uses and collaboration with other institutions interested in research in iodin. It is headed by Dr. George M. Karns, formerly a member of the chemistry faculty of the University of Illinois.

Most of the work which has been done on the importance of iodin in life processes has been confined to man, but there is reason to believe that it also plays a vital part in the lower animals, such as cattle, sheep, and swine. Accordingly, the Mellon Institute has arranged for the study of problems of this type at the Pennsylvania State College. The investigation, which is being directed by Professor E. B. Forbes, of the Institute of Animal Nutrition, is financed by an additional appropriation from the Iodin Educational Bureau, 64 Water Street, New York City. Dr. Karns and his associates on the Iodin Fellowship at Mellon Institute are coöperating by preparing standardized feeds containing known quantities of iodin. An additional aspect of the research program is being carried on at the Philadelphia College of Pharmacy and Science under the direction of Dean Charles H. La Wall. In this institution an attempt is being made to develop other preparations of iodin for external application in addition to the alcoholic tincture now used almost universally. The Mellon Institute is giving consideration to the founding of a research scholarship in a medical school for the purpose of aiding in the solution of incompletely answered questions respecting the utility of iodin in internal medicine. All results obtained in these various investigations, comprising work of the Iodin Fellowship at Mellon Institute and of the scholarship at other institutions, will be made available to the public through scientific publications.—*Philadelphia Inquirer.*

Institutional Child Said to Lack Sense of Responsibility

Can the child from an institution grow up to be as valuable a citizen as the child from the home? Hundreds of welfare workers who attended the Eastern regional conference of the Child Welfare League of America, recently held in Philadelphia, thought it could.

The affirmative was dependent upon a grave condition, according to Miss Elsa Ueland, president of Carson College, Flourtown, just outside Chestnut Hill. This condition lies in the difficulty of imparting a sense of responsibility to the institutional child. "It is an irony to be faced," said Miss Ueland, "that institutional organization in many ways works against the development of responsibility in the individual."

"The children see no economic struggle visibly present. It is somebody else's money. There are few emergencies, and every emergency, such as illness, is 'up to the office.'

"The child usually feels that his stay is temporary, and that his experience in an institution has little to do with his own inner life, his own purpose, his own real friends, his own people.

"Outer conformity is not impossible to secure in any school, but the inner, living response to the situation and the needs about him on the part of each individual is very difficult.

"How can responsibility be fostered, responsibility for the care of property, for behavior, for accomplishment of a fair share of work?

"Student government organizations are one solution of the problem, but in many cases such organizations fail."

Several speakers suggested that one of the best methods of developing a sense of responsibility is to prove to the children that their teachers and guardians are sympathetic to them in every way.

One of the speakers at the conference was Mr. C. C. Carstens, of New York, executive director of the league, and, also, chairman of the division for handicapped children in the White House Conference. Mr. Carstens declared it is possible that the White House Conference, initiated by President Hoover, would result in the formulation of some great principle of child assistance. The first such conference, in Roosevelt's administration, resulted in the organization of mothers' assistance funds; the second, sponsored by President Wilson, proclaimed the principle upon which maternity aid is now publicly supported.

The New Calendar

A large mail-order house has announced that it will make a test of the thirteen-month calendar by using it for one year or more. Several other firms have already adopted the system, which wonderfully simplifies the matter of accounting. Every month consists of four weeks and no extra days. Only the salaried man will miss the occasional fifth pay some odd month brings, and his is no real loss. Doubtless the example set will be followed by other big firms. Eventually, it may be, the new calendar will receive official sanction. This is something for which calendar reformers have long been striving.

Only legal backing will give the suggested calendar all the advantages claimed for it. Uniformity is one of them. The first of every month will always be Sunday. St. Patrick's Day will always be Tuesday. The Fourth of July and Christmas Day will always be Wednesday. Thanksgiving Day will always be Thursday, November 26. Halloween will continue to be the last day of October, but by the new ruling would always be Saturday, October 28. And it may be, ecclesiastical ruling will so arrange things that Easter will have a regular place on the calendar.

Not the least of the advantages of the new calendar is one that is never stressed. It will give one very old superstition its death blow. The unlucky thirteen will cease to be unlucky. We will not dare to have it otherwise with thirteen months in the year, and each one of them containing Friday the thirteenth.

Dr. W. W. Keen has gone on record as being a warm advocate of the thirteen-month calendar.

Opportunities Afforded by Medical Schools for the Study of Medicine

Dr. A. J. Rongy, 590 West End Avenue, New York City, in a letter forwarded with a questionnaire to the various medical schools, states that a leading Anglo-Jewish magazine has commissioned him to make a survey of the opportunities afforded by the medical schools in the United States and Canada.

He says that recently much discussion has appeared in the press and at meetings by those concerned with, and interested in, the training of medical students, regarding the method employed to select the applicants for admission to medical schools, as it had been pointed out by some that not infrequently discrimination is practiced against Jewish applicants.

His impression is that if an accurate investigation were made, based on statistical data, giving the racial origin or religious affiliations of the students, it would disclose that the average Jewish applicant does gain admission to the medical school.

The questionnaire seeks to base its study upon the period 1925 to 1929, and among other things to obtain the following information as to Protestants, Catholics, and Jews: The number of applicants; total number admitted each year; the number failed in each year of the course; how many matriculates had academic degrees; how many students received prizes or election to honorary societies; how many are residents of the state in which the school is located; and how many received hospital appointments.

Nurses' Registries

June 9 to 14, 1930, are the dates set for the next biennial convention at Milwaukee of the three national nursing organizations. It will be the twenty-seventh convention of the American Nurses' Association, the thirty-seventh convention of the National League of Nursing Education, and the fourteenth convention of the National Organization for Public Health Nursing.

As work on the study of the official registries progresses, more and more of the needs and developments in opportunity in the registry are being found by Julia P. Wilkinson, R.N., field secretary in charge of the survey.

In reviewing the reasons for this study, Mrs. Alma H. Scott, field secretary, states: "There is perhaps no medium that could be made to offer greater opportunities for the private duty nurse than the official registry."

Believing this to be true, Mrs. Scott said: "The Board of Directors of the American Nurses' Association at the January, 1929, meeting, decided to place an additional member on the Headquarters' staff to make a study of registries and their relation to the distribution of nursing service. It was felt if central professional registries could be established on a thoroughly business-like basis that communities could be offered more complete, more diversified, more economical nursing service and private duty could be evolved from its present status into a stabilized organized profession comparable in its hours, income, and chance for specialization and advancement with other branches of nursing.

"The study to date has yielded a wealth of material from which it may be possible to prepare a tentative outline of minimum standards for official registries. It has, however, also afforded a vast amount of very practical information concerning the concrete problems of the private duty nurse. Further, it has furnished in many instances knowledge of why the relation between the nurse and the registry and the community has not always been a happy one. In other words, data have been obtained which when carefully analyzed may furnish a basis for strengthening the usefulness of the private duty nurse and the registry in the community, and at the same time result in a more satisfactory professional life for the private duty nurse."—*American Nurses' Association Bulletin.*

The Question of Surgery During Pregnancy as Observed From the Dental Standpoint

The attending physician not infrequently is asked by the pregnant woman regarding dental attention during her pregnancy, and the safest time to have it done. On the other hand the physician should give attention to the mouth as part of his routine prenatal care.

The most recent article on this subject is the following by Fred Grimm, D.D.S., which appeared in the January number of the *Proceedings of the Davis Memorial Hospital*, Elkins, West Virginia.

From personal study he has made certain observations with regard to the question of operative dentistry during pregnancy. The decision should usually rest upon the combined opinion of family physician and dentist. It is easy to formulate rules of practice, but in the presence of an urgent condition these may be disregarded. Gestation is usually a normal physiologic process which should permit liberty of treatment within sensible limits. Therefore, he has never hesitated to operate at any time during pregnancy, bearing in mind at all times the factors that form the basis of caution.

With regard to the practical question of dental operations, one should recognize certain periods of greater susceptibility to disturbances. The first three months constitute the period of greatest nervous instability, as evidenced by reflex vomiting. The system is accommodating itself to the new order of affairs. Certain organs are undergoing changes to accommodate new and increased function. The latent weaknesses of organs may become manifest. It is during this period that the organism is either going to accommodate itself or not, and in this instance there may result an abortion. Once this period is passed without mishap, health and vigor improve, and as a rule after the fourth month the state of health of the mother is often the best ever experienced. Everything being equal this status continues through gestation, except perhaps during the last two months when the possibility of premature labor and the various toxemias may become manifest.

For the purpose of study and practice, gestation is divided into three periods, namely, first three months, the susceptible and accommodative; the fourth to the seventh month, the period of greatest health; the last two months, the period of increasing discomfort and the dangers of renal and hepatic toxemias.

During the first period extensive operative procedures should be avoided, unless absolutely necessary. Prolonged filling operations, or extractions had better be postponed until after this unstable time provided there is no definite evidence of toxicity resulting from the focus of infection. It is well to remember, however, that even the extraction of a tooth may occasion less disturbance, than prolonged toothache through several days and sleepless nights. In case the extraction of a tooth is necessary this may well be accomplished with an anesthetic and in consultation with the physician in charge. He suggests that the time of choice for dental operations lies within the second period, and preferably during the fifth and sixth months. Because at this time

the general health of the mother is at its best and the danger of disturbing gestation is at its minimum. Every precaution should be taken to avoid pain, and short sittings should be the rule.

Concerning the use of anesthetics, it is well to repeat that a general anesthetic for prolonged operations should be done after consultation with the family physician. Local anesthesia will do no harm if efforts are made to rule out any susceptibility to the agents employed.

During the third period of gestation a restrained posture in the dental chair for long intervals of time may do harm, especially since there are dangers of premature labor at this time. For this reason it is well to avoid operative procedures during this time, unless urgent, and then in consultation with the family physician.

Federal Pilot Licenses

The following resolutions were adopted by the A. M. A., at the Portland, Oregon, session, July, 1929.

WHEREAS, the Aeronautics Branch, Department of Commerce, has organized a medical service for the physical examinations of civil pilots and prospective pilots, in the interests of safety; and

WHEREAS, the physical standards adopted are in keeping with those adopted universally, and have reduced aircraft accidents from physical causes to a minimum; and

WHEREAS, the department has required these examinations to be made only by designated physicians in the interest of uniformity and control and in accordance with the custom adopted for the Army and Navy and in other countries; and

WHEREAS, the selection of examining physicians by the department has been based on training as flight surgeons or its equivalent, or on group examinations by specialists, a high standard of examination has resulted; and

WHEREAS, the department requires that all examiners hold the degree of Doctor of Medicine, be licensed to practice medicine under the laws of their respective states, and further requires that the appointees be recognized as ethical practitioners in their respective localities, thereby supporting the high standards advocated by this Association, be it

Resolved, that the American Medical Association at its stated assembly in 1929 endorses the medical work of the Department of Commerce, its methods of physical examination, and its method of selection of medical examiners, and urges that the same high standards be continued and offers the support of the American Medical Association in furthering the specialty of aviation medicine; and be it further

Resolved, that a copy of this resolution be sent to the president of the United States, the secretary of commerce, and the secretary of each state medical society.

There are now about 750 medical examiners throughout the country. These examiners are appointed by the secretary of commerce. All the examination papers are reviewed in Washington.

INDUSTRIAL MEDICINE

Health Hazards from the Ingestion of Small Amounts of Metals.—An article in the *Medical Journal and Record* (New York) states that the metals which may be ingested with food in quantities small but nevertheless capable of producing symptoms are copper, mercury, zinc, lead and arsenic. Copper may be a menace in the distillation of liquors and, as Mallory points out, in the preparation of apple butter made in copper kettles. The action of copper on the vitamin content of milk, which has been thoroughly investigated by Hess, shows definite deleterious changes. Arsenic is the most widely distributed element. The widespread use of insecticides in order to produce more perfect fruits and vegetables, the use of impure ingredients in the preparation of artificial foods, offer wide possibilities of contamination. Wrappers used for bread and other foods have been the source of contamination, also, particularly blue, purple, and green wrappers. The present method of disposing of the boll weevil through the use of calcium arsenate puts arsenic in cotton. Its presence is also found in glycerol, gelatin, bismuth, glucose, subnitrate, canned fruits, calamine lotion, tartar emetic, ichthyol, celery, pears, cherries, peaches, lettuce, tomatoes, potatoes, cabbage, apples and wines. It has been stated that arsenic was added to ensilage as a tonic for the fattening of animals as well as for the milk producing cows. The end result of this can only be the presence of arsenic in our meat and milk. The time has not yet arrived when obscure clinical symptoms can be explained on the basis of the action of small amounts of metals. This is due to lack of general knowledge of the action of these metals. There can be no question, however, with regard to the widespread damage done by lead and arsenic from insecticides.

Compulsory Medical Supervision.—The Consumers' League of Massachusetts has recommended that there should be compulsory medical supervision of all women working in candy industries.

Tendency to Greater Benefits in Workmen's Compensation.—According to an article by G. Smith published in the *United States Daily,* in forty-four of the forty-eight states, society as a whole has accepted the responsibility of guarding workers against accidental injury or death; of providing medical care and financial compensation for those who do become accident victims; of extending financial benefits to the dependents of those killed. The day when an injured worker had to fight for justice single-handed is gone. Workmen's Compensation has been tried and found good. Its continuous development will end only if the time comes when civilization itself ceases to progress.

Today only Arkansas, Florida, Mississippi, and South Carolina are without compensation laws. Agitation for them is strong in all four states, and it is considered almost certain that compensation measures will be adopted shortly in South Carolina and Florida at least.

Claim for Compensation Denied.—The Workmen's Compensation Act of Pennsylvania does not entitle to compensation an employee who worked for three or four weeks where there were six to ten inches of water and took a cold, which turned to lobar pneumonia and caused his death. The board held that the decedent did not undergo a condition of exposure which produced an abrupt internal violence, although the wettings received by the decedent caused or contributed to his death is a strong inference.

Death by Vaccination Termed Compensable.—The Michigan Supreme Court holds that death caused by an infection following vaccination ordered by an employer is a compensable accident. The court was of the opinion that the vaccination wound was not an

accident because it was not an unforeseen event, but the infection was an accident, being of an unusual nature and traced directly to the vaccination.

The Virginia Industrial Commission has ruled recently that, within the meaning of the state Workmen's Compensation Law, infection resulting from vaccination is not an accident and that this was not an added risk to the claimant's employment.

PHYSICAL THERAPY

Education in Physical Therapy

Every physician interested in physical therapy should read, *without fail,* the report of the Council on Physical Therapy on "Education in Physical Therapy" in *The Journal of the American Medical Association* for February 8, 1930. This interesting report deserves careful reading and unqualified support by all medical teachers and medical society officers.

We desire to call particular attention to certain paragraphs. The first, on undergraduate instruction, reads as follows:

Undergraduate instruction. This must be modified to meet the curriculum of each school. In the main, the teaching should be clinical. It may all be given by one instructor, or some one may be designated to act as a coördinator of a course in which special lecturers from the other departments of the school demonstrate the use of physical measures in their departments. The student should be taught the indications for and the limitations of such therapeusis in order that he may realize that it is a valuable adjunct to routine medicine and surgery. This course should consist of a minimum of thirty-two hours, which may be given in the department of physical therapy or in the other coördinated departments. . . . In the courses given under the auspices of various departments, the coördinator should see that the foregoing didactic and clinical lectures are provided for and that the remaining hours are equally apportioned. If possible, these courses should be given in either the third or fourth year. Where the college regulations are such that it is impossible for them to be listed as separate courses, they may be made an integral part of some standard course, such as medicine, pharmacology or therapeutics. . . .

Our comment on this particular portion of the report would be that we believe most emphatically that physical therapy can *not* be properly taught unless there is a separate and distinct department of physical therapy in the teaching hospital of the medical school. We doubt very much whether the most capable coördinator could collect, from various departments, a group of lecturers with sufficient interest to present the entire subject of physical therapy in a systematic, balanced, and logical manner. We have so frequently seen physical therapy submerged by being placed under some other department—such as, orthopedics, neurology, or medicine—with a consequent teaching of this subject only as it applies to this particular, narrow field, that we strongly urge that no such plan be adopted.

We do not believe that roentgenology or clinical laboratory work could be taught properly, especially in the technical phases, by having the surgeon, internist and other specialists give lectures on the application of roentgenology or clinical laboratory tests to their particular fields. We believe that the director of the x-ray department and his staff, as well as the director of the clinical laboratory and his staff, should give instruction in their particular branches, in all their aspects. In a similar manner, we believe that the physical therapy department should be developed as a separate entity, with the understanding that it shall serve all other departments, just as do the x-ray department and the clinical laboratory; and that the director of the physical therapy department and his staff should be entirely responsible for the balanced instruction in their branch of medicine.

The director may, if he so desires, have lecturers from other departments speak on certain aspects of physical therapy; but let him do most of the teaching and discuss the technic himself, for very few of the physicians in other branches will know the minute details of physical therapy technic and be able to discuss, for instance, the necessity of combination prescriptions.

The teaching department of physical therapeutics may even be placed under the department of medicine, therapeutics, or pharmacology; but in such case, the head of the department should also be the director of the physical therapy department in the teaching hospital, and this department should be a distinct unit, serving all other departments equally.

The second portion of the report to which we desire to call attention reads as follows:

Courses sponsored by medical societies. Here much may be accomplished. It may be possible for the American Medical Association and certain selected medical societies to collaborate in this, the American Medical Association providing a list of approved speakers, with the society attending to the details of arrangements. . . . Instruction of great value can be extended almost immediately to the practicing profession throughout the country. In no other group of medically trained persons would the results of instruction in physical therapy bear such immediate consequences. The Council believes that this is one of the most urgent fields with which the Council can concern itself. Moreover, delay in inauguration of teaching physical therapy to practitioners at large will result in the production of many cases of deformity, limitation of motion, and chronic invalidism that can be definitely avoided. Weighed in the scale of benefit to persons now living, probably no other equal opportunity will come before organized medicine to alleviate and prevent suffering. . . .

To this particular paragraph, we can only add our most hearty endorsement, and urge that all medical societies coöperate in the inauguration of such courses.

Finally, there is one sentence in the report with which we desire to take issue. This sentence reads: "Diathermy, of course, deserves little emphasis, except as one of the forms of heat." To say the least, such a statement, coming from an august body like the Council on Physical Therapy, is likely to do untold harm to the study of the use of the high-frequency currents. We grant that the makers of high-frequency apparatus have greatly over-commercialized their products; nevertheless, this most valuable agent should not, therefore, be thus summarily condemned by the Council. We doubt if there is a single member of the Council, who is familiar with electrotherapy and who is using it in his practice, who is *not* using a diathermy machine. If this statement had been made merely concerning the monoterminal application of the high-frequency current by means of vacuum and nonvacuum electrodes, it might have been justified; however, this method is little used by experienced physical therapists, and it is not really diathermy. For the Council, the purported defenders of physical therapy, to make such a statement with regard to true diathermy, in the face of the rapidly accumulating facts concerning its value—both medically

and surgically—seems almost incredible. In its surgical application alone, there are sufficient facts to show conclusively that diathermy is considerably more than just one of the forms of heat. With what other form of heat can one achieve the accurately controlled destruction of tissue that can be obtained with surgical diathermy (electrodesiccation, electrocoagulation, or acusection)? By what other method can one procure the readily controlled local heating effects obtainable with medical diathermy? Granted that Binger and Christie have demonstrated that in vascular tissues which offer little resistance to the electrical current (such as the lung), local temperature is raised only slightly at a point midway between the electrodes; nevertheless, these same experimenters showed that if the blood supply was cut off the local temperature rose very rapidly. In the less vascular and more resistant portions of the body, there must, therefore, be a much greater rise in local temperature. By what other form of heat can one obtain *any* rise in temperature deep within a local area?

In addition, is the Council to disregard entirely the other effects which may possibly be produced by diathermy?

Does the Council entirely ignore the recent statement of that noted authority on electrotherapy, W. J. Turrell, of Oxford, that, "In the case of the high-frequency currents, the most important recent advance appears to be the increasing recognition of the fact that these currents do not owe their therapeutic effects to their heating action alone, but also to the more fundamental action of the ionic oscillations and vibrations which precede and produce the heating effect"?

We therefore request the Council to give this matter further consideration, and either to retract this particular statement or to substantiate it. We believe that it will be withdrawn.

Aside from the objections cited above, we heartily endorse the Council's report.

Couch that Promises Repose for Physical Therapy Patients

Dr. William Bierman describes a couch that is made up essentially of a metal frame, placed on legs made of tubular steel, on top of which there is a coil spring. Into the bottom of the legs are inserted wooden gliders. The spring is so made that its head may be readily elevated. On top of the spring is placed a thick felt mattress, covered with imitation leather. Extending down from the mattress is a valance of material similar to the mattress cover. This valance completely encircles the entire couch and extends to the floor. The couch is 26 inches high, 30 inches wide, and 6½ feet long. Patients appear to prefer being placed on these couches—rather than on the usual hard wooden plinths. All the usual types of electrotherapeutic procedures can be satisfactorily administered. No unpleasant shocks have been observed. It permits patients who have difficulty in getting on the usual table to get on the couch readily.—*Modern Hospital.*

Revolving Solarium at Aix

The revolving solarium at Aix-les-Bains, construction of which began in June, 1929, and which will be completed by June, 1930, will truly deserve the title of the finest solarium in the world.

It owes its entire conception to Dr. Jean Saidman, director of the *Institut d'Actinologie*, who has carried out preliminary work for some years.

It consists of a building 28 meters long by 11 meters wide, poised on a towerlike structure, and free to revolve so that it is always facing the sun. In the center is an observation room for measuring the solar rays. This is fitted with a quartz monochromator, with a condensation lens 215 mm. in diameter. The radiation is measured in one region by thermopiles connected to galvanometers, and in the other by photo-electric cells.

The wings of the superstructure contain ten irradiation cabins. The fronts of these consist of panes of glass transparent to ultraviolet rays, and these, as well as the roof, can be opened at will, leaving the patient completely in the open mountain air, hidden from neighbors, and surrounded by apparatus for the concentration or filtration of the solar radiation. Fresh air is assured by a refrigerating apparatus which is supplementary to the normal currents of air at a height of 15 meters above the ground.

In these conditions one can administer large quantities of energy; the solar radiation is not utilized "plain," but after preliminary concentration and filtration. Concentration is effected by means of large lenses or by movable reflectors. The filtration allows one to obtain, as desired, either ultraviolet rays alone (2900-3300 A.U., or 2900-4000 A.U.), or infrared alone, or the visible spectrum. The energy concentrated on the irradiated region is measured by a thermopile connected to the medical supervisor's room. If the amount of energy suddenly becomes too great, the operator can reduce it at will.

Exposure times are determined after a preliminary test of the patient's cutaneous reaction. When the measuring apparatus shows that the solar irradiation has fallen below a certain intensity (in consequence of clouds or mist), ultraviolet lamps can be lit at once.

The supporting tower of the solarium contains apparatus for radiodiagnosis, radiotherapy and treatment by short Hertzian waves, whose association with ultraviolet constitutes "polyradiotherapy," which gives results superior to those of actinotherapy alone.

The solarium will thus offer to patients a complete service for treatment.—*British Journal of Actinotherapy and Physiotherapy.*

MEDICOLEGAL NOTES

Coroner's Discretion as to Autopsy and Inquest.—A coroner may order an autopsy if in his judgment it is the appropriate means of ascertaining the cause of death, and this he may do without the consent of the family of the deceased (Young v. College of Physicians and Surgeons, 81 Md. 358). It is presumed, in the absence of a contrary showing, that an official duty has been regularly performed (Morgan v. County of San Diego, 3 Cal. App. 454). The performance of an autopsy is not the holding of an inquest. The decision of the question whether an inquest is necessary rests in the sound discretion of the coroner, Huntly v. Zurich General Accident & Liability Inc. Co. (Cal. App.), 280 Pac. 163.—*Medical Journal and Record.*

Hospital Not Liable for Negligence of Nurse Assisting Surgeon in Operating Room.—The Louisiana Court of Appeals, Jordan v. Tours Infirmary, 123 So. 726, holds that a nurse furnished to patients in a hospital is not a servant within the meaning of article 2320 of the Louisiana Civil Code while performing duties in the operating room under the surgeon's orders, and, therefore, the hospital is not

responsible for the errors and negligence of such nurse while so engaged. The court adopts the rule that institutions which furnish hospital accommodations and medical attendance to different classes of patients, some for pay and others free of charge, not, however, for making money or profit but for benevolent and charitable purposes exclusively, and whose entire receipts and revenues are devoted to such purposes, are not liable, even to pay patients, for the errors or negligent acts of competent nurses furnished by them to their patients while such nurses are in the operating room assisting the surgeon and under his orders. The court said: "We perceive no difference in principle in the responsibility of a hospital in the employment of a physician and of a nurse. If it is not liable for the malpractice committed by a licensed registered physician of good reputation employed by it, by a parity of reasoning it cannot be responsible for the errors or negligence of a graduated nurse, and the authorities are to that effect." The testimony in the case showed that the nurses were absolutely under the orders of the surgeons in the operating room and in no manner controlled by the hospital's officers. Therefore, the court said, the hospital was not responsible for the acts of the nurses. They might be considered, in such matters as the servants of the surgeon. In this case the surgeon was employed by the plaintiff himself. The act of negligence alleged in the case was the application of hot bags to the plaintiff's feet while he was under the influence of anesthetics, blistering the feet.—*Medical Journal and Record.*

When Nervousness Is an Element of Damage.—Nervousness, when the reasonable outcome of physical injuries, is always an element of damage and obviously evidence relating thereto may properly be submitted to the jury. Johnson v. Pearson (Cal. App.) 280 Pac. 394.—*Medical Journal and Record.*

Psychiatric Service.—According to *Science-News Letter,* a resolution which recommends a psychiatric service to assist the judge in determining the sentence was recently published by the committee on psychiatric jurisdiction of American Bar Association. The chairman of this committee of lawyers, Professor Rollin M. Perkins of the University of Iowa Law School, said that the hope is to do away, as far as possible, with the battle of experts in the courtroom and to permit the mental expert to assist the law.

Casual Connection Between Injury and Death.—The Louisiana Court of Appeals holds, Colquette v. Louisiana Cent. Lumber Co., 119 So. 714, that where the testimony of the medical experts in a suit under the Workmen's Compensation Act, whether the deceased died as the result of injuries received or from natural causes, is conflicting and irreconcilable, and the testimony of the lay witnesses tends to corroborate the testimony of the doctors who were of the opinion that the death was caused by the accident, the finding of the trial judge that there was causal connection between the injury and the death will not be disturbed. In determining whether there was any connection between an injury and the death of the employee from Bright's disease, to allow compensation under the Workmen's Compensation Act, the Louisiana Court of Appeals held, Arrender v. Grant Timber & Mfg. Co., 119 So. 498 that the opinion of physicians who personally attended the deceased and knew his condition from first-hand information was entitled to more weight than that of those who never saw him.—*Medical Journal and Record.*

County Bonds for Hospital Held Authorized by Statute.—In a suit by a county to validate county bonds for the purchase of a site and the construction of a hospital, the state of Florida challenged the validity of the bonds on the ground that they were issued in violation of section 5 of article 9 of the state Constitution, which provides that the Legislature shall authorize counties in the state to assess and impose taxes for county purposes and for no other purpose. It was contended that the bonds were not for a county purpose. The statute authorizing the issue of the bonds, Sp. Acts, 1927, c. 13528, specifically authorizes the purchase of a site for the construction of a hospital or hospitals in the county and provides that said hospital or hospitals shall be for a public purpose and for the benefit of all the people of the county. The Florida Supreme Court holds, State v. Walton County, 119 So. 865, that these provisions of the act made the bonds for a county purpose within the Constitutional provision. The statute cures the defects of a former Act of 1925, which was held void because it did not provide that the general hospital authorized therein was for a county purpose, and did not authorize the county commissioners to purchase a site and erect the hospital.—*Medical Journal and Record.*

Private Hospital Held Not Liable for Negligence of Its Officers Practicing within Hospital.—What is the liability of a private hospital corporation, operated for gain, for the negligence of a surgeon who is an officer, director, and stockholder, and who maintains an office and practices his profession within the hospital? This, as stated by the court, was the question involved in Johnson v. City Hospital Co., 146 S. E. 573, an action against a hospital for improper treatment of a broken arm. The arm was x-rayed by the president of the hospital and treated by the secretary. These two physicians owned about 55 per cent of the capital stock of the corporation. By agreement with the directors they were permitted to maintain private offices in the building, and had the exclusive right to treat all surgical cases, with specified exceptions, and to receive the fees therefor. The plaintiff in this case was not entered as a patient of the hospital, and no bill was rendered him for operating room fees or otherwise. The hospital had no control over the x-ray machine, which belonged to the president, and it received no part of the charges for x-ray pictures. The secretary of the hospital was not employed by it to treat any patients. The court stated the general rule as to the liability of hospitals where fees were charged with the exception and hope of securing gain and profit to be that the proprietors of institutions of this class are held to the duty of ordinary care in the treatment and protection of those intrusted to them, and are responsible for injuries resulting from failure to perform this duty. It is also a well recognized rule of law that corporations are liable for the negligent, willful, or malicious torts of their servants or agents when acting within the course and scope of their employment. The ultimate inquiry, therefore, was whether or not the secretary, in treating the plaintiff, was acting as the servant or agent of the hospital corporation and within the course and scope of his employment. Clearly, the corporation would not be liable for the negligent acts of its officers merely because they were officers; and the action was against the hospital alone. Viewing the facts with that liberality required by the law, the court held there was no evidence tending to show that the secretary was the hospital's agent in treating the plaintiff; but rather that it disclosed that the plain-

tiff was a private patient of the secretary, who, in treating him, was exercising an independent and individual professional judgment and skill. Judgment for plaintiff was therefore reversed and a nonsuit directed.—*Medical Journal and Record.*

PUBLIC HEALTH

Infant Death Rate.—Negro infant mortality rates, in every area recently studied, were higher than that for white infants, according to information recently made available by the Public Health Service. In Baltimore, Md., and Richmond, Va., negro infant mortality has declined more rapidly than that of the white population. According to figures just issued by the Montana bureau of vital statistics, the Indian infant mortality rate was found to be 212.4 against 64 for the white race.

Oregon, which reported the lowest infant death rate in 1927, again leads the United States in 1928 (the last year for which figures have been compiled by the Bureau of Census) as the safest state for babies, with a rate of 47 deaths per 1000 live births. This is the lowest rate ever reported by any state in the birth registration area.

Care of Lepers by the United States Public Health Service.—An estimate of 1200 cases of leprosy in the United States is conservative, according to a statement just issued by the Public Health Service.

This report states that in some of the states, leprosy has long been a problem of importance because of its presence in neighborhoods populated by descendants of certain of the earlier settlers, and of the fact that its propagation there is due to factors not well understood. For lack of better explanation, racial or family predisposition, local habits and customs, and the like, are ascribed as causes. In other states, particularly those with large seaports, cases of leprosy develop among immigrants who have been admitted with the disease in an early and undiagnosable form, and the disease has spread, slowly, to be sure, among the native population. A third source of infection is that found in our military and maritime population. The soldier or seaman who has lived in an infected territory for a number of years, has contracted the disease, and has later returned to his native country.

Geographically, the Gulf Coast States are considered as the most important foci of leprosy in continental United States; for here is recognized indisputable evidence of the continued propagation of leprosy, and here the disease has existed for generations, having been sustained by contact with leprous communities through commercial sources.

In many instances, physicians have hesitated to report known cases of leprosy because of the unwarranted hysteria that would have been provoked by the report of the presence of a case of leprosy in a neighborhood where no suitable facilities existed for isolation and treatment, and where the leper had been permitted and encouraged to move on. Sometimes this method of dealing with lepers has been most humiliating to the leper and disgraceful to the community.

It was evident more than fifty years ago that some concerted action was necessary if the progress of leprosy in the United States was to be checked, and plans were formulated for having the Federal Government assume control of the situation. Constructive effort, however, did not crystallize until February 3, 1917, when Congress enacted legislation and provided funds for the establishment of a national home for lepers to be under the direction of the U. S. Public Health Service. The entrance of the United States into the World War prevented, for a time, active measures from being taken toward this project, although a committee was appointed to select a site for the proposed leper home. This committee met with great opposition in obtaining a site, because no state cared to cede territory to the Government for use as a leper settlement, and the problem was finally solved by purchasing from the State of Louisiana the estate occupied by the Louisiana Leper Home.

This was developed by the U. S. Public Health Service into the present National Leprosarium at Carville, La., where 306 lepers are now under treatment.

Coöperative Rural Health Work.—The Public Health Service has recently reported on its coöperative rural health work. This work is conducted in coöperation with state and local health authorities. At the beginning of 1929, there were 467 whole-time county or district health officers in the United States.

The rural sanitation work of the Public Health Service is accomplished more economically and with more lasting effects by a permanent local health force than by a specialized force working temporarily in the locality. The average coöperative county health service costs less than fifty cents per capita of population served. This is a striking example of efficiency with economy in public service.

During the Mississippi flood disasters, in 1927, the advantages of the established whole-time county health departments were definitely demonstrated. The health officers promptly and efficiently organized working forces and carried out measures for immediate and postflood sanitary protection of the people.

Since this flood, coöperative agencies including the United States Public Health Service, the Rockefeller Foundation, and the State Health Departments have undertaken to develop whole-time county health departments in the 90 flood-stricken counties which were without such organizations at the time of the flood. Three-fourths of these counties, in spite of great difficulties, are now provided with whole-time county health officers. From all evidence, if the health service now operating in these flood counties is continued, even at this present grade of efficiency, for the next four years the net economic gain from this health service will more than offset the economic loss from the Mississippi Flood of 1927.

Sight Conservation.—Abnormal conditions of the eyes were found among twenty-one per cent of the kindergarten and nursery children examined in a four-year study of the vision of preschool-age children in New York City recently completed by the National Society for the Prevention of Blindness.

Records were obtained from 21 kindergartens and nurseries in Brooklyn and Manhattan, with 30 nationalities represented. Of the 982 children inspected, 350 were recommended for routing to ophthalmologists, and 232 actually received the examinations. Of these, 206 or approximately 21 per cent of the whole had some abnormal condition of the eye. The children were between the ages of three and six. Twelve ophthalmologists of Manhattan and Brooklyn gave freely of their services in the study.

In making public the results of this study, Dr. B. Franklin Royer, medical director of the society, said:

"For a considerable period of time we have believed that if more attention is given to the detection and

alleviation of eye defects in young children, especially in children of preschool age, the eye defects found at school age might be decreased and the vision in many instances might be definitely conserved. With this thought in mind, and with a determination to obtain enough statistical data for guidance, the study was started by examining the eyes of children of preschool age who were being given complete physical examinations at several setlement houses."

"For the purpose of determining the facts relative to the incidence of eye defects it was felt that in securing data concerning 1000 children, different nationalities should be included, so that our average findings might represent a pretty good cross-section of New York preschool children and might more closely represent the average American child.

"In testing the acuity of vision of a preschool age child who is unable to read the letters of the alphabet, a special technic is used."

HOSPITAL ACTIVITIES

The Patient's Record—*Continued*

After completing the personal history, the next procedure is the *physical examination*. In developing the history, every courtesy should be shown the patient, and in making the physical examination the patient should be handled like a human being, and not as any one would ordinarily handle an inanimate object.

It is often said that the manner of an intern's attitude toward a ward patient is not the same as a private patient. This attitude is unworthy of a physician, and should not be tolerated. It has also been noted that one who has interned in a county hospital, soon finds after he enters private practice, that patients who are paying for his services, will not tolerate rough handling or a dictatorial manner which he had unfortunately assumed with the poor people in the county hospital. The fact that these patients are so unfortunate in their social status, is all the more reason why they should receive considerate care.

The physical examination record is, with the history, the most important record. It should give the name and address of the patient, and sufficient space to record the working or provisional diagnosis, which of course cannot be entered until the physical examination is completed. The physical examination should be carefully and thoroughly made. Any doubtful findings should be checked up from time to time.

The patient should not be unduly exposed. All parts of the skin surface should be exposed, a portion at a time, to observe any eruption, scars, etc. The chest and abdomen cannot be completely studied without exposure. A superficial, hurriedly-made, careless examination, of course is worthless.

Time should be given to the examination and the findings properly interpreted and duly recorded. There is no excuse for the chief not fulfilling his obligation in making a physical examination, and making any additions or corrections in the recorded findings of the intern. If he does not, all errors will remain credited to him, as he must finally approve the chart.

The diagnosis must be based upon a competent physical examination, hence the science and art of the physician in eliciting physical signs and properly interpreting them demonstrates his skill in making a physical examination. Unless the physical examination is efficiently completed, the proper diagnosis cannot be made, hence the required treatment cannot be outlined.

The chief owes a great responsibility to the intern to properly instruct him in the methods of making a physical examination. He should instruct him, too, how to use the various instruments of precision ordinarily used at the bedside for aiding in making a clinical diagnosis.

When a private patient refuses to give a history, or permit a physical examination to be made, then the chief should supply the intern with the data.

In making a physical examination of a woman private patient, the intern should not make a pelvic examination, unless permission is given first by the chief who has discussed it with the patient. As to the public ward gynecologic service, the intern should routinely make a pelvic examination and duly record his findings. The chief of necessity must dictate any corrections or additions, because an intern as a rule is far from proficient in making an acceptable pelvic examination. Should an intern on a public ward service, other than gynecologic, make a pelvic examination, if there are symptoms referable to the pelvis? The rules of the respective hospital should be the answer to this question.

If in the development of the history and upon completion of the physical examination, there are existing or suspected conditions requiring an examination by services other than the one to which the patient is assigned, then a request should be made for an examination by the respective services.

All necessary laboratory work and x-ray study should be requested. All patients should routinely have on admission a urinalysis, blood Wassermann, differential blood count, and hemaglobin estimate. All gynecologic patients in addition should have a cervical smear taken.

The signature of the intern and the chief must appear at the bottom of the page. The Board of Medical Education and Licensure insists that the intern and the chief shall sign the physical examination record, the same as the personal history record, preferably at the time of the writing of the history and making the physical, as given in the March number of the Journal.

Should Gynecologic Cases Be Assigned to the Surgeon?—This question arose in an institution of 300 beds in which the gynecologic and obstetric services have recently been reorganized. It emanated from a recently appointed obstetrician who, upon assuming his duties, found that while he was expected and permitted to deliver patients, he was not allowed to perform gynecologic repairs or intra-abdominal pelvic operations.

The difficulty experienced by this physician is in no way unique. In the course of departmentalizing the work of the hospital staff, the surgeon often objects to relinquishing any type of work that has hitherto been denominated as belonging to the general surgical department. The surgeon, with some justice, complains that so rapidly have specialists developed within his own field that soon there will be no part of the human body left upon which he may justly perform needed operations. Orthopedic, urologic, laryngologic, and gynecologic specialists have arisen so rapidly that the surgeon finds himself excluded from hitherto unrestricted territory.

The relationship between the work of the obstetrician and that of the gynecologist is so close that it is unusual to find a physician devoting his time to the former type of work without being equally skilled in the work of the latter specialty. Repairs following labor, infections

of the pelvic organs with resulting need for surgical interference, are operative steps so closely allied to the practice of obstetrics that it would seem all such work should be carried out by the same individual. When such a difficulty arises it would seem best, in order to avoid staff friction, to bring about a gradual assumption of the gynecologic work in the hospital by the obstetrician. This may be accomplished by permitting these physicians to bring in private gynecologic cases, by allowing them later a few gynecologic beds and, still later, by assigning all gynecologic surgical procedures to the obstetrician. Nor is this suggestion made with any idea of unfairness to the surgeon. Greater efficiency will develop in the obstetrical department, if postpuerperal surgery is performed by the same physician who supervised the patient before and during delivery.—*Modern Hospital.*

What Should be Done When a Case of Tuberculosis is Discovered in the Hospital Ward?—There appears to exist in the minds of many something of a phobia relative to the contagiousness of tuberculosis. It is not the purpose of this statement in any way to lessen the wholesome fear which many people rightfully feel for this loathsome disease. On the other hand, tuberculosis is probably not transmitted from the sick to the well with the same ease that is often supposed. Because of this fact, it represents less of a danger to other hospital patients than is at times thought. Indeed, it is questionable whether a general hospital is justified in refusing to admit under certain conditions tuberculous patients for treatment. Certainly when a case of pulmonary phthisis is admitted to the hospital, the institution assumes a certain amount of responsibility in placing this patient properly. If it is an open case and the sputum contains tubercle bacilli, it would be a good practice to remove the patient to well-lighted and well-ventilated quarters and to sterilize his dishes before they come in contact with those of others. It is neither fair to the patient nor to the hospital to continue to treat over a long period of time a tuberculous patient in a crowded ward with the usual hospital temperature.

As to the question of deliberately taking a patient with tuberculosis into the hospital, it may be said that particularly in city and county institutions there should be provisions for third-stage cases. It is not a good practice to transport these very ill patients to distant sanatoriums, nor do they stand any better chance of recovery in such surroundings than they do in a properly constructed ward in an urban hospital. It is the feeling of many administrators that general hospitals should possess the necessary facilities for the care of these patients, particularly those whose condition has followed pneumonia or some other disease for which the hospital has treated the patient.

The belief that tuberculosis is as easily transmissible as measles or even pneumonia, for example, appears to be unfounded. Those who are informed do not feel that the hospital has a right to demand the immediate removal of a case of tuberculosis from the institution when proper contagious precautions cannot be taken at the home in which there may even be children or in which the sanitary surroundings are inferior to those in the institution from which he comes. The time is fast approaching when the figurative consciences of general hospitals will require more generous provisions for diseases of all types than is commonly the case today.—*Modern Hospital.*

British Motorists to Raise Hospital Fund.—A hospital fund to be raised by British motorists and allocated to hospitals in collaboration with the British Hospitals Association is shortly to be forthcoming, according to the Prince Albert Hospital Gazette. This announcement was made by Sir Arthur Stanley, chairman of the Royal Automobile Club, of the Joint Council of the British Red Cross and order of St. John, and treasurer of St. Thomas's Hospital. The fund is to be used to assist the hospitals outside the large centers. According to Sir Arthur, road accidents have placed a heavy burden on voluntary hospitals in all parts of the country, many of them being in a position of desperate financial difficulty. Motoring, he pointed out, has added 220,000 pounds a year to the expenses of hospitals outside the London area. The accident cases due to motoring cost these places a total of 250,000 pounds, and only 30,000 pounds are recovered from the persons treated. Credit for instituting a fund of this nature should be given to the Auto-Cycle Union, which arranged with its affiliated clubs that a percentage of all receipts at sports meetings where gate money was charged should be given to hospitals.—*Modern Hospital.*

TRISTATE MEDICAL CONFERENCE

The fourteenth regular session of the Tristate Medical Conference was held at the Hotel Pennsylvania, New York City, Saturday, February 8, 1930, and was called to order at 10 a. m. by Dr. William H. Ross, president-elect of the New York State Medical Society. Those from Pennsylvania, present at the meeting, were: William T. Sharpless, Walter F. Donaldson, Frank C. Hammond, and Arthur C. Morgan.

A paper entitled "How Can the Medical Profession, Through Its Units, Most Effectively Coöperate in Promoting the Modern Lay Public Health Program?" prepared by Dr. James N. Vander Veer, president of the New York State Medical Society, was read by Dr. Joseph S. Lawrence in the absence of Dr. Vander Veer detained at home on account of illness.

How Can the Medical Profession, Through Its Units, Most Effectively Coöperate in Promoting the Modern Lay Public Health Program?

JAMES NEWELL VANDER VEER, M.D.
ALBANY, N. Y.

In a forum of this type to discuss medical topics, it is a hard matter to envisage the points of view of others. We can, ourselves, plan, without considering others, and undoubtedly formulate campaign after campaign and arrive nowhere.

It is for us mostly to deal with our own people and through them bring to light the newer types of preventive medicine, which are thrusting their heads upward and are the topics of discussion in all groups, wherever and whenever gathered; and which are bringing forth the query—what are the doctors doing? I believe our problems lie in answering that query.

If we divide the subject into three parts, perhaps we can carry it better in our minds: (1) The medical profession. (2) The correlating agencies. (3) The public mind. These seem to be the parties most concerned—though the medical profession has seemed to grasp the changes that are taking place more slowly than the public, and the intermediaries, the correlating agencies, seem to be that factor willing to expend money untold in the philanthropic movements now going forward.

The subject is vast, intriguing, and historically seems to have had its inception even before Moses and his well-known code of sanitation. But its depth, length, and breadth have not experienced the driving force which we see shown to so great a degree as fell upon us just before, during, and after our World War, and as is now seen in high speed.

The medical profession has from time immemorial been more individualistic and yet more anxious, when attacked, to defend its general rights than any other profession extant.

With the national, state, and county bodies, progress is slowly, but oh, so slowly, being made. Yet, I feel they are on the right course and need but to be speeded up in their efforts. Too few meetings of each of these components are held and there is too little discussion of real value. Though when discussion has been free and a plan of action has been mapped out—then, too often, there is shirking on the part of the individual who has the job to do, and he tacitly lets the work go by the board. There are too few men in our component units who think in terms of the unit.

Then we have the special societies and the societies of specialists in cities, counties, states, and in the national bodies. In the main these special bodies do not contribute to our public health program save as they furnish scientific advancement and perhaps speakers of eminence for lay programs. The academies of groupings do contribute sporadically to health programs, for there is usually some group within the academy that is interested and thus the necessary enthusiasm is aroused.

The county society—the very beginning of the groupings of physicians—has something lacking in a large percentage of such societies in every state. In the county societies lies our hope of first hand education, from whence the individual physician will be educated himself and later pass on the authentic knowledge to his own special set—his patients. But in our county societies as agents, we find two very opposed groups—those who scoff at preventive or public health medicine, and those who are pioneering in it. It was so with our Erie Canal; with the first railway engine, steamboat, and flying machine; and in medicine we can remember vaccination, antitoxins, and a thousand innovations within our own time. There always were, and always will be, those who cannot sense the future. But if, any due trial, prevention of any disease, or its eradication, can be absolutely predicated, then it is the duty of the medical man to accept the scientific facts and prepare himself to gain the same or a better livelihood in newer lines of similar work.

Our good works are not heralded as widely as are our failures. It is, therefore, our duty to ourselves to put forth the newer preventive methods and discard the older failures—by taking our own postgraduate work within our own family and taught by our own relations. This can be done only by intensifying our postgraduate work in curative medicine along with broad courses in preventive medicine—given at first to larger bodies which will pass on the knowledge to the smaller units, and so to the public. At first we can, perhaps, use only our public health officials—physicians they must be in every instance, who are sympathetic with the lowly practitioner and his problems, and yet conversant with the specialist and his narrower outlook on extraneous diseases. For this we must tax ourselves. It is due the public, and as we perfect ourselves, in just such proportion will we be repaid ultimately.

We cannot advertise as individuals, blatantly in the press, but by his works can each individual physician be known, and in very fact so is he known. News agencies and lay magazines are for the second grouping and, if properly guided through a relationship between the honest doctor and the honest lay unit, can accomplish far more than the medical unit in this day and era.

In state public health work we are being apparently hampered and each year more confined in our scope as individual physicians through laws and regulations. This is the evolution of the age. Other units of other groups are suffering in the same manner. We cannot prevent it; our work is to guide it. In many states, public health is guided by the state medical unit. In our own state we lost that asset many years ago, but are beginning at least to regain our prestige and position through our own correlating agency unit, which we call our Public Relations Committee. Through it should come a reëstablishment of faith. But it will be here only, as elsewhere, through the hard and earnest work of each individual physician on that committee, willing to sacrifice time, and hence money, in the interest of the profession as a whole.

Our own state is not organized as it should be. There is laziness among a majority of our physicians, or selfish complacency. Paid executives are needed in larger numbers—and for the smaller units—than even the most foresighted of our own can now discern. Business is being organized even into chain stores and supergroupings to eliminate waste and loss of time and energy. The unit of physicians could well employ high-salaried executives to plan for them in distribution of effort, allocation of practice, and much else which now the individual does not and cannot concern himself. We can thus prepare against national or state onslaught which would take us as a unit and, through the privilege to practice, so limit our efforts as would compel each physician to locate as are the men on a checkerboard. That problem is ours to settle—not that of the state or the public. Later, we will organize ourselves into a business unit, as has been done with hospitals, clinics, and even groups as our own state has done in insurance; at first, as now, for defense; later, it will be for offense. Our business executives and legal advisers should be the ones to do this thinking—for the average doctor cannot think in such terms.

The second unit, the correlating agencies, I will not discuss at great length. We have lost our guidance and direction of their efforts mainly through our own fault in being lazy in the past year, and allowing those physicians of far-seeing vision, perhaps—and yet of all too selfish tendencies—to obtain individual control of unit after unit and then by the simple means of interlocking boards of directors to compel the doctor as an individual or in units to accept the dicta of such groups. To regain our places with such groups by close coöperation in efforts as are worthy but not fanatical is again the duty of a public relationship that needs constant and daily nurturing. For this we should be willing to pay, nay, the state should return to the medical unit the privilege of licensing and everyone so licensed should be compelled to be a member of, and under the discipline of, the state medical unit.

As for the third group, the public, we find it fed upon literature of lay and professional—nonpracticing—persons who are highly theoretical. They toil and spin without ceasing and by such enmesh the public on the one hand in expensive and high-powered machinery to rescue a few individuals from physical dereliction. It is like the shepherd with his ninety and nine. The doctor must chime in with plans, evolved by those not

familiar with actualities, and many times is caught in the maelstrom of things not practical. He must meet the public who are receptive but only half-informed and armed with specious deductions that are not only illogical but are positively dangerous. The public must be reëducated and to the doctor falls that duty, alas, finding him in the main, unprepared.

The public deals in money values of mass movements; the physician must necessarily deal in smaller units, mostly of the individual. And as such it is harder for the physician to reach more quickly in a given space of time each individual of his unit.

Therefore, for purposes of publishing the newer methods of prevention and cure of disease the physician naturally looks to the county society or to the larger group to reach, through advertising methods, these newer means of prevention and cure. As well has the public learned to look into the literature of the day and from thence does it gain its knowledge. So again is it a matter of correlation between the groups of the public and their individuals in matters of expression to gain their information from the groupings of the medical profession as to the manner in which the public should be reached in a proper way, and with the latest scientific knowledge.

Much more could be said on the part of the public group and the manner in which information should be made available to them, and their education so modeled that they realize the standpoint of the physician. This might well be reserved for future discussion.

A paper, bearing the same title, written by Dr. William T. Sharpless, president of the Pennsylvania State Medical Society, was, because of his delayed arrival, read by Dr. Walter F. Donaldson.

How Can the Medical Profession, Through Its Units, Most Effectively Coöperate in Promoting the Modern Lay Public Health Program?

WILLIAM T. SHARPLESS, M.D.
WEST CHESTER, PA.

In considering this question, one immediately asks one's self what are the units of the medical profession meant in this query? Besides our state and county medical societies, there are many local and special societies which are also units of the medical profession. The problems of all these societies are largely the same and so I shall assume that the unit meant is the county medical society, or at least that it represents them. Again, the question is ambiguous. It asks how can these units coöperate most effectively in promoting the modern health program. Coöperate with whom? With lay organizations? With state departments of health? With individual physicians or other interested but unofficial people? I shall assume again that as most individuals interested in public health are members of some nonmedical organization devoted to this purpose, it is these organizations that are meant.

Medical societies, like other societies, are made up of individuals and the activities of the society represent the sum of the interests and opinions of the members, and so it is the individual member of the county society whom we must reach before there can be any coöperation. Too frequently this member has very little interest in the general question of disease prevention. He may be very attentive to the needs of his own patients in this respect but the broad question of disease prevention for the masses through legislative enactments or organized effort fails to gain his interest.

It, therefore, seems to me that the first step toward "coöperating in promoting the modern health program" is to reach the average member of our county society and convince him of the importance of the program and the strong probability of benefit to the health of the community. This can be done only by persistent effort, by making it prominent in society meetings and in medical journals and by demonstrating the results of such work in other places. He must also be convinced that the organization with which he is asked to coöperate is worthy in motive and efficient in administration. If there are a sufficient number of convinced and earnest members of a county society to direct the program of the society it may then, and not before, seek coöperation with other bodies working for the public health.

The attitude of the county society toward the lay health organization is finely expressed by Dr. Theodore B. Appel, secretary of health of Pennsylvania, when he says: "The medical society should again attain to the position which it once occupied and to which by training and education, theory and ideals, it is better fitted than any other professional or lay organization, namely, the court of reference for data, advice, and influence covering the local health situation."

So much for the campaign of education that must be carried on in many places in order to enlist the interest and coöperation of the county medical societies. All health organizations in a county should be brought together or at least correlated under one administrative head including social service and visiting nurse societies, neuropsychiatric clinics, antenatal and postnatal clinics, well baby clinics, child welfare and child guidance clinics, antituberculosis and mental hygiene clinics, recreational activities, etc., in order to bring about economy of operation and to prevent overlapping of activities and of geographic distribution. The relation of the county medical society (through a special committee) to this unified body should be advisory in character and it should map out and supervise the work of the whole.

The first step in a well-planned health campaign should be a survey of health conditions in the county, and effort should be concentrated on that part of the county where health conditions are the worst. The services of members of the special committee of the county medical society and of other members of the society should be available in addressing the constituent societies and public meetings under their auspices. The committee of the county society should also arrange for radio addresses where possible, articles in local papers, before teachers' institutes, service clubs, parent-teacher organizations, and public schools. Examinations of school children as to their general health and mental conditions are now practiced in most of our public schools and here the school nurse as well as the physician can be of the greatest service.

The county society should also sponsor the establishment of new mental and other clinics as the need demands, if existing organizations do not cover the ground. In Pennsylvania, one meeting of the county medical society each year is devoted to the prevention and treatment of tuberculosis and cancer, respectively, and mental hygiene is also given a special meeting. These meetings are usually addressed by some one especially interested in these branches and particular emphasis is placed on the prevention of disease. The public and particularly the social service workers and district nurses are invited to these meetings.

Immunization against diphtheria is a subject which affords excellent opportunity for coöperation between

physicians and lay health organization, as the latter can induce patients to go to physicians for the Schick test or for the administration of toxin-antitoxin.

The comparatively recent organization of the woman's auxiliary to the state medical society, which now is in active and helpful existence in about twenty-five counties in Pennsylvania, is instrumental in the above mentioned activities and in promoting periodic health examinations and other means for the prevention of disease. It works in close coöperation with state and county medical societies and the officers of the medical societies or the state director of health indicates to the auxiliary what work in which counties is most needed.

A marked change has occurred in the minds of the laity in the attitude toward preventive medicine brought about largely by the tactful approach of the health workers and the advice of the family physician and the public health programs of county medical societies. Probably the most difficult prejudice to overcome was that with regard to toxin-antitoxin. This has been largely eliminated and coöperation of parents, physicians, and health workers has made it possible, according to the report covering six years including 1927, to immunize against diphtheria over 600,000 children in Pennsylvania.

It is humiliating to have to record that medical societies and individual physicians in many places have stubbornly resisted the earnest efforts of state and other health societies and these organizations were obliged to go to lay organizations for assistance. The demand of certain county societies to control all health activities even to the point of opposing child health centers and other agencies sponsored by the Red Cross and antituberculosis societies and by the State Department of Health.

Certain physicians also insist that only those unable to pay for medical care shall be given the benefit of health centers and that others shall go to their family physicians. Such physicians usually do not give as good care to their patients as given at the health centers, and in well-conducted centers no advice with regard to treatment is given. For this they are referred to their family physicians. There is a growing feeling on the part of some county health centers that physicians should not be expected to give unlimited free service to those applying to these centers and in some places arrangements are being made to recompense them by money payment. The ideal that should animate all physicians, and this ideal should be expressed through the work of county medical societies, is that of unselfish service to the public—for pay, if that can be made without embarrassment to the patient—free, if the patient is unable to pay; and toward this ideal, physicians and lay organizations alike should coöperate and county medical societies should exercise an advisory care over the whole.

A paper, bearing the same title as the above, was presented by Dr. Andrew F. McBride, president of the New Jersey State Medical Society.

How Can the Medical Profession, Through Its Units, Most Effectively Coöperate in Promoting the Modern Lay Public Health Program?

Andrew F. McBride, M.D.
Paterson, N. J.

In response to President Vander Veer's invitation to present a ten-minute talk upon this subject, that might be considered as in part a basis for the round-table discussion that is to follow, I am pleased to address this Tristate Conference. There are many ways in which one might formulate an answer to the question propounded, and the allotted time might be fully occupied in presentation of any one of those ways, but as I assume the intention is to start discussion of as many as possible of the various aspects of this problem, and as I am best informed concerning what my own state society has been trying to do toward the promotion of a modern public health program, it will be best, perhaps, if I attempt to tell what the Medical Society of New Jersey has done and is trying to do in this field of endeavor.

During the past six years, serving as chairman of the Welfare Committee, vice-president, and now as president of that Society, it has been my fortune to be intimately associated with the public relations of the medical profession in New Jersey. Throughout all that time the word coöperation has been more than any other the watchword or the slogan of the organization and it has had a profound influence upon our work and our progress. There is an old adage, one can catch more flies with molasses than with vinegar, and that axiomatic expression is applicable to most dealings between organizations of dissimilar type, or between organizations and unorganized groups. One might suppose there would be universal recognition of that fact and a natural tendency toward harmony, especially where various groups are engaged in efforts to attain the same given objective, such as abolition of diseases like tuberculosis and diphtheria. As a matter of fact, however, there is very frequently a contrary state of affairs. There seems to be a natural predisposition, inherent to the majority of individuals, certainly to a very large proportion of those engaged in professional work or united in a trade guild. I think it is that natural inclination to oppose new ideas, new suggestions, new methods of procedure, that impels physicians to look askance at any health-betterment proposition coming from outsiders. At any rate, every lay organization that has voluntarily entered into public health work has at first met with the cold shoulder of the medical profession, and not infrequently the profession has been to a degree hostile to public health measures emanating even from what may be called semiprofessional sources, such as Boards of Health. I think it can be said on behalf of the profession that invariably the thoughtful leaders have recognized and supported the worthy public health movements from whatever source, lay or professional, they may have arisen; and, always in time, the majority of the profession has fallen into line.

In New Jersey, we have been neither better nor worse than the physicians of other states but during the last few years we have been making an extra effort to inculcate a definite policy of coöperation and to apply that policy to our associations, within and outside of the profession, asking only for assurance that the project under consideration is definitely in the interest of public welfare. We might, therefore, answer Dr. Vander Veer's question in a single sentence by saying that the medical profession, through its state society and all the component county branches thereof, can best serve its own interests by a policy of coöperation with any and all agencies engaged in the promotion of real public health programs. That is the principle upon which we have long been working, and the principle that guides our plans for the immediate future.

If it seems desirable to be more specific as to details, we may enumerate some of the ways in which we have found coöperation feasible and advantageous to the public; and I wish to make clear my personal belief that whatever is advantageous to the public is at the

same time advantageous to the members of the medical profession.

We have, in New Jersey, a number of state and county organizations whose work bears directly upon the health of the people. Among these may be mentioned: state, county and city boards of health; a state board of examiners which controls the licensing of physicians and neophysicians, if we may use the latter term to embrace osteopaths, chiropractors, and chiropodists; a State Board of Education and all of the county and city adjunct bodies; a State Board of Institutions and Agencies, that supervises hospitals for nervous and mental diseases and also the penal institutions. Then, we have a group of organizations, some with county or small local branches, whose interests are concerned with the health of the people in one way or another: the State Sanitary and Public Health Association, Association of Health Officers, the Red Cross, the Tuberculosis League, Child Welfare Organization, State Commission for Crippled Children, and mental hygiene clinics now just being established. With each and all of these, the state medical society, and with reference to local conditions the county medical society, keeps in close contact, offering to supply service and advice whenever desired, requesting consultation upon plans that may be at any time under consideration, and expressing willingness to aid in the promotion of such plans as may be adopted after conjoint consideration. On the other hand, we sometimes go to these institutions and organizations with our own suggestions, and with requests that they join us in promotion of some public health movement; as we did, for instance, when launching the statewide antidiphtheria campaign, in which we secured the support of all organized lay bodies in the state.

It has become an established custom with us for the president, the secretary, and the executive secretary of the state medical society each to attend one meeting per annum of each of the twenty-one county medical societies. The executive secretary keeps in touch with all the other organizations mentioned and, whenever it appears necessary or advisable, the officers of the state society confer with such groups. On visiting the county societies, we not only give them national and state organizational news but inquire about local conditions, and if we learn of any trouble existing or threatened, we offer to assist provided the county society cannot itself handle that problem satisfactorily.

We have learned from experience that there are needs of fundamental importance in promoting health programs. To secure a good crop, the farmer must do much more than scatter a lot of seed; the land must be carefully tilled before and after the sowing. So it is in public health fields; there is much preparation of soil necessary, and there has to be considerable supervision of the work and the workers until the crop is actually harvested. The outstanding need is, of course, education. The public must be educated to the point of feeling the necessity for, and being ready to receive, the proposed health measure. Members of the medical profession must be educated to the point of working in combination and at the right time so that the plowing and the planting may be done in the spring, the cultivating in the summer, and the harvesting in the autumn; to understand that individual farm-hands, each cultivating his own particular row at such time as chances to please himself, is not conducive to a good crop; that hay must be made while the sun shines; that the united profession, working harmoniously with an educated public, can accomplish much in a short time, while a disorganized profession, at odds with well-meaning, even if misguided, lay bodies, cannot efficiently serve humanity.

Our society maintains a field secretary who is laboring day and night to enlighten the people, and just at present she is concentrating upon the young people—school teachers and school children—as to the safeguarding of health and prolongation of life; and her work, coincident with the efforts of the state society officers and the county society membership will, we believe, result in the greatest coöperative movement for health-betterment that New Jersey has ever known.

Coöperation is the word employed in the title given to this discussion, and I have attempted to point out some of the means whereby state and county societies may apply the principle of coöperation, but, I wish to add that there is one thing of even more importance than any single act or any number of acts of coöperation; and that is, that our dealings with the profession and with the public regarding health matters should be conducted in the spirit of coöperation—for life is in the spirit, not in the body.

Discussion

In accord with previous arrangement, discussion of these three papers was to be by the president-elect and secretaries of the three societies, and then others present.

Dr. William H. Ross (Brentwood, L. I.): I will assume that what is meant by this subject is coöperation with official and voluntary health agencies. I should like to have heard the speakers put into language the definition of a modern health program. It is not unusual to find a county medical society that has not an understanding of what a modern health program is, and whose members need a "sensitization to the receptivity of new ideas and ideals," as has been said by Dr. Sharpless. While the medical group has done more for human happiness than any other group, and as much for civilization, it has not yet expressed an overwhelming interest in preventive medicine.

In contrast with the indifference of medical societies is the activity of voluntary agencies. Their work has been well expressed by Dr. Theobald Smith: "Without the voluntary activities of lay groups entering the field of public health it would be well nigh impossible to stimulate the interest of the public and create a so-called public opinion, which, in the last resort, is our dependence in assisting the inert mass of tradition—medical, legal and lay—to move a step forward." The health agencies, both voluntary and official, have done this. Now that the public demand is here, the medical profession must act along with it or suffer a declining influence. Times are changing, traditions fading, and prejudices melting away. The most effective way for the medical profession to coöperate in promoting a modern program will be for its own members to submit to public health education. The medical profession must see that medical practice and preventive medicine are not antagonistic but complementary. Public health deals with the public *en masse;* private practice concerns individuals.

Physicians can best coöperate in public health through the county medical society. The work will begin by a few leaders whose leaven will influence man after man until it inspires the whole membership. The first step of the society will be to organize a real public health and public relations committee, and give such committees power to act in the name of the society.

The Medical Society of the State of New York, through its committee on Public Relations, has advised

the county societies to follow this plan, and to take steps to survey the field and ascertain what public health work is now being done in each county, and the organizations so engaged. When the survey is completed the state society can formulate the next step, which is to develop a definite program of coöperation with other bodies working for public health.

The county medical society can be brought to do public health work only by pioneer leadership; the pioneer leader must appear. Dr. T. B. Appel, secretary of health of Pennsylvania, says: "The county society should regain the position which it once occupied, to provide health data and advice in all local situations."

There should be one official organization in public health in each county, with subdivisions covering the various fields. In counties having a county health department, the county medical society should be the adviser and consultant of the department in all medical matters, as is done in Suffolk County.

The profession lacks generally a correlating agent, by whatever name it may be called, some one to represent medical practice before other health organizations.

It is often said that a county medical society should conduct a publicity campaign; but how can it do so without a paid agent? It will be necessary that the county society shall tell the people what health service they may get by going to their family doctors. This will include stimulating the people to ask for preventive service. The family physician may not always be prepared to give it, but there is no better way to arouse him to practice preventive medicine than to inspire the people to ask for immunizations and other forms of health protection. Both groups—physicians and lay health workers—need to be educated. Some county medical societies, seeing only the mistakes of lay health organizations, have lost sight of the great good that those organizations have done. Yet these very lay organizations have given a broader conception of what is expected from the family doctor, and have aroused the public to consult the doctors and their county organizations, just as an individual now consults his family doctor.

The constitution of nearly every county and state medical society states two objects for which the society is formed: (1) advancement of the science and art of medicine; (2) the betterment of public health.

The second object is promoted by the practice of preventive medicine, especially by medical organizations. Many county societies in New York, New Jersey, and Pennsylvania are doing splendid public health work, and are thereby demonstrating that others can do likewise. It is therefore depressing to hear any society declare that public health work is already being done as well as it can be. How long will it be before the medical profession sees that preventive medicine is opening the door of opportunity for the medical profession to engage in a form of practice which shall more than make up for the loss of practice of the curative form? Preventive medicine is opening the door of opportunity for a solution of many of the problems of the medical profession including that of economic disturbance. The social trend of time has established the era of preventive medicine. We have often heard of the onslaughts on medicine by the state and by other organizations; but what and where are these onslaughts? The public, state, and health organizations expect the profession to do the things that should be done in health advance. The majority of doctors have not yet grasped the idea of entering the open door of preventive medicine, and thereby replace their occupation lost, as one disease after another has disappeared under the influence of modern health medicine. Doctors can recoup their losses by systematic immunization of the stream of newly born flowing into the world to replace those who have lived their allotted years.

I wish to leave this one thought with you today. Let the profession answer the question: In what does a modern public health program consist? Let the profession define its policy toward modern public health service. Is it one of aloofness and opposition; or is it one of active coöperation with all other health forces?

Dr. George N. J. Sommer (Trenton, N. J.): In reading over the two papers that were submitted to me for study, I have been trying to see wherein the profession fails. If I may take my experience as a member of the county medical society for thirty-five years, naturally I have a great many ideas as to why the local profession at least falls down on local problems, and I have tried to visualize it as I see it. The profession always seems to have a hundred reasons why a thing cannot be done and no reason why it can be done. I see the same thing in the hospital staff of which I am a member. After our last conference held at Atlantic City, I went home and talked over the question of health examinations for the members of the hospital staff, trying to have them institute an annual health survey of all physicians connected with the hospital. From the members of the major staff there came at once a multitude of objections. Some of them were afraid they would be expected to have a Wassermann done and if it happened to be positive every one would know about it; or would know about any defects that might be found. Eventually, however, I put the idea over and a committee was appointed at one of the clinical conferences at the hospital in which this subject was discussed and illustrated by a film on health examinations. So, in time, this hospital staff will get a careful examination at the hands of their fellows. Some of them have volunteered to be publicly examined for the benefit of the juniors, to show how it should be done.

I think the influence of specialism today has in a measure mentally tied the hands of the average practitioner because he thinks only in terms of the ordinary diseases as he sees them from day to day and not in terms of the diseases limited to certain organs. He feels that he is deficient in trying to determine the ordinary visual defects, or diseases of the nose and throat beyond diphtheria, and he does not feel that he is fully up to the mark but tries to compare himself with a highly-trained specialist and therefore prefers to let someone else do it. Our idea was that we would endeavor to show the younger men connected with our staff how easily and simply an ordinary health examination can be made and the necessary training in special lines is quite easy to acquire. Then after doing this we intend to give it some publicity in our local papers and use that as an argument for the general public, that if we physicians are willing to undergo an annual health examination there is no reason why they should not have one.

Now as to the wider problems, I think the average physician looks upon this from the standpoint of economics, failing to realize that the economic side of medicine, even though it is terribly important, adjusts itself. If you render a real service to the community it will respond economically a thousandfold. I, personally, have never considered my work from the standpoint of money and yet I feel that I have been very

amply repaid as the years have gone along. I always considered that service was the most important thing and the financial reward the least important and I am free to say that I have not suffered from that standpoint.

For a number of years I had a relationship with some of the local health programs. I was very much appalled at the ignorance of those who ran the programs, that is the laymen, and their utter indifference or unwillingness to listen to us, particularly in relation to tuberculosis. They were more interested in running a tuberculosis camp during the summer, and gathering money to run it, than in permitting the profession in general to have anything to do with it. They occupied all of the offices so that the medical men were left out in the cold, and I got out.

Another unfortunate thing in relation to these public health programs is our individualistic attitude. Every physician is interested in his own special problem and does not care sufficiently about the problems of others. There are only a few, at least, who have the vision to be interested in others' problems. I have noticed that our county society will have a big crowd in attendance when there is to be a discussion on economics, but if the program consists of some scientific matter, particularly if it is put on by a local man, very few will attend. Out of one hundred and forty members we will have perhaps twenty-five or thirty present. Sometimes when there is important business to be transacted we will have hardly a quorum. Recently when we were discussing a very important subject—our present attitude toward contract practice and its relationship to the industrial group—we started our meeting with only eighteen present, and finally had only twenty-five out of a total of one hundred and forty. Even that economic problem did not seem to interest them.

What have I to offer as a solution? I believe that the general policy of coöperation of our state society is the real answer to the question.

Dr. Walter F. Donaldson (Pittsburgh, Pa.): My contribution to this discussion will take the form of a brief review of a public health movement going on in my own city of Pittsburgh in the last three months. I will not apologize for injecting a selfish angle, because I have, heretofore, put myself on record in this group of state medical society officers as being in sympathy with practically all our expressed beliefs to the effect that the reward will come in due time to all who enter fully into these sickness prevention programs.

I will, however, give you my personal reactions as a private practitioner. In Pittsburgh's recent campaign for immunization against diphtheria, our public health director, who has a thorough medical organization background, announced a campaign of three months, in which all the efforts of his department would be bent on having children of preschool age immunized against diphtheria by private practitioners before this work was taken up by his department. He had the full coöperation of the mayor, City Council, Pittsburgh Chamber of Commerce, newspapers, Allegheny County Medical Society, and all such groups. He assured me on more than one occasion that he was satisfied with the way in which the members of the medical profession arose to the occasion. The city even went so far as to appropriate several thousand dollars worth of antitoxin free of charge for the use of physicians. This was accompanied by a request that private practitioners would, in view of this fact, reduce their fees as much as possible. They were asked to make the fee for full immunization equal only to that of their usual single office fee if possible. I cannot say what proportion of physicians coöperated to that extent, but I know a great many of them did.

I mention the following experiences, which may seem petty, but I want you to visualize the experience that so frequently contributes to the antagonism among what we choose to call the rank and file of the county medical societies. I had not been interested in this three months' campaign very long until, making a call in a private home, a mother said to me: "Doctor, just as soon as Jimmie recovers from these swollen glands which he has developed since having inflamed tonsils, I want you to immunize him against diphtheria." A visiting woman in the living-room said: "Why don't you wait and have that done at school? That is the way we had David immunized." I happened to know that these folks belong to a country club and drive a car, so, as a private practitioner, I immediately received a setback on the proposed program.

On another occasion, a mother, perfectly able to pay, imbued with the idea that her child should be immunized before starting to public school, brought her youngest child to my office for that purpose, but announced that she would wait until the campaign opens up in the public schools to have the other two children immunized.

On another occasion a woman came to consult me about overweight. I learned that she is a school teacher, that her husband is employed, and her father who makes his home with them is employed, and that she had in reality probably come to consult me because of the prosperity in the family which permits her to overeat. Then she asked my opinion whether or not these public health workers who immunize the children free of cost are competent.

Another woman brought her child to me for immunization and announced that she understood that it was to be done free of charge. I inquired why she had asked me to do it at all, and she said: "Because I know you will do it right," which of course is the explanation why any of us have success in competition with free clinics, etc.

I think when we as medical society officers are working with public health groups, we should always keep in mind this very problem of economics, which has been mentioned more than once and which is of fundamental importance. There must be some way in which the public health workers can check on immunization and vaccination of children, free of charge, from homes in which the parents can afford automobiles, country clubs, etc. In any program that we consider, we certainly should keep in mind the economic interests of our fellow practitioners. Otherwise, in a short time, they will have taken away from them the privilege the last speaker referred to, the opportunity to practice preventive medicine. There must be some way found of keeping the persons who are well able to pay, out of the places in which this work is done free of charge. I think our medical societies should begin at once to call attention, as Dr. Wynne is doing in New York, to the fact that paid public health workers, doctors and nurses, who now put in their time in immunizing the children of those who are able to pay, might better be used in some other branch of health work and the taxpayers be saved the money that is thus being expended. I think county medical societies should enter into this problem with the local chamber of commerce and other organizations interested in keeping down the taxes, and make it clear that this work must not be done free for those who are able to pay. I think we will be able to interest groups of this kind on this same selfish

basis. This aspect of the subject is uppermost in my mind at this time, and I think we should not overlook it. I do not know how many of you are doing general practice, but, I assure you, I have not exaggerated this point of view. Let us continue our devotion to public health programs, but, at the same time, "protect them (the medical profession) against imposition"—I quote from Article 11 of the Constitution of the Medical Society of the State of Pennsylvania.

Dr. J. B. Morrison (Newark, N. J.): During the six years it has been my pleasure to act as secretary of the Medical Society of New Jersey, I have conducted a continuous educational campaign in the county societies. At first I was accused of attempting to carry out the message that Dr. Ross V. Patterson has sent to us today, that the program was too ambitious, that we were attempting the impossible. The chief subject of the early education was an attempt to bring about a degree of coöperation between the different state boards and the profession. At that time the medical profession had a chip on its shoulder and there was a constant fight on between them and the State Board of Health and State Board of Education. Coöperation or any attempt to work along the same lines, or to formulate a policy that would lead to the advancement of public health seemed to be out of the question. But we have hammered at that so constantly that at last the lance seems to have split the mountain.

Essex County in New Jersey holds the same relation to the state that Manhattan Island holds to the state of New York. In that county a few of us were approached and asked to coöperate with a Public Health Council whose function it was to attempt to supervise and correlate all of the efforts expended on public health in that county. Dr. Sharpless says that all health organizations in the county should be brought together under one body composed of persons who are interested in this subject. We said that we would be glad to serve on that council if they would allow us to have five physicians on an executive committee of thirteen persons, and I may say that the five physicians are guiding the activity of the work and we look to the time when this health council supervising the health activities in about one-third of the state of New Jersey will have this work so extended that we can organize a state council under the same head.

We have done an enormous amount of work in the antidiphtheria campaign and have been discouraged many times with the apparent results, but we heard from the State Board of Health last week that there have been 575,000 children immunized and this compares very favorably with the figures in Pennsylvania. We are now engaged in an active campaign for immunization of the preschool children and we look forward to almost the same degree of success. The labor will be greater because it is far more difficult to persuade the parents to submit the little infant to immunization. We are being greatly helped by the Parent-Teacher Association. The figures are being handed to the various diphtheria committees and an avenue of approach to the parents is being opened.

We are now establishing over the state of New Jersey Mental Hygiene Clinics and this will be one of the big projects in New Jersey in the next four years.

The spirit of coöperation is being pushed in every idea. We are giving up one entire session this year of the Annual Meeting of the Medical Society of New Jersey to representatives of the State Boards of Health and Education, the Department of Institutions and Agencies, and the State Board of Medical Examiners, and we trust at this meeting that their representatives will supply the degree of coöperation which is so necessary. This can be done only by frank round-table talk in which each of us presents his problems and each shows the other where he can best be of assistance.

In all my talks to the county societies, I endeavor to impress upon the members of the profession that we are in a changing state, the practice of medicine is no longer what it was in the past; no physician can feel that he is serving the public when he will treat only acute or chronic diseases; the public is being educated to the fact that the medical profession possesses a large amount of knowledge that should be given to the public; the public expects of us this degree of coöperation in eliminating infectious and other diseases.

Along the line advanced by Dr. Ross, I make talks to every county society I attend on preventive medicine and I tell physicians that this is the greatest advance in medicine since the introduction of antiseptic surgery. We attempt to show them that the important point in bringing about preventive medicine is that the public will come to us not when diseased but rather to preserve the health that God has given them, and the economic problem will take care of itself.

We have found our field secretary and the editor of the state journal of inestimable value. Our field secretary makes the point of contact with all the groups where it is necessary to present these ideas of preventive medicine and public health. She is being constantly importuned to give health talks and talks on how to prevent disease.

This year, as a result of our coöperation with the State Board of Education, it has been made possible for all the school children in New Jersey to hear these talks. It is almost impossible to evaluate what this will mean in inculcating this thought in every teacher, every parent, and every school child—to go to their physicians for health instruction.

Dr. Arthur C. Morgan (Philadelphia, Pa.): Medicine, when we were on the benches, was taught entirely from the curative standpoint. Medicine today should be taught from the preventive standpoint, with the curative factor being minimized. There should be an attempt made by the organized medical profession to enlist teachers in the medical institutions along this line of a practical application of preventive medicine in presenting the subject to their students. In recent years, it was my good fortune to serve as a teacher of applied therapeutics, and I may state that that feature of my teaching, which was paramount from the year 1921, became intensified from the time that I became identified with this Tristate Medical Conference. In our student days, hygiene and sanitation were taken as a matter of course. The teachers were not especially interested, they could not sell their goods at that time. Today, the stone which the builders rejected has become the chief corner stone.

Illustration is one of the best ways of driving home an argument. In Pennsylvania, in the late eighties, a tremendous epidemic of typhoid fever developed at Plymouth. It was definitely traced by Dr. Shakespeare, of Philadelphia, to one case, the story of which is recorded in history. That was in Luzerne County. Luzerne and Lackawanna Counties need not be told now about the absolute necessity of maintaining a pure water supply and protecting the watersheds in order to prevent the development of typhoid. On the main line of the railroad running through Scranton there is a very rigid rule of the Railroad Company with respect to keeping the toilets closed when they go over the

streams that supply the watershed that feeds Scranton and Wilkes-Barre in particular.

In Pittsburgh some years ago quarantining for pneumonia was sold to the public because of the efforts crystallized by one man, a director of health. Pittsburgh cannnot be sold rigid quarantine against smallpox because they were educated along the pneumonia line but not the smallpox line. On the other hand, Philadelphia needs no education regarding smallpox quarantine but it needs considerable instruction in respect to pneumonia. Philadelphia is being educated along the line of diphtheria immunization and splendid results have been obtained by reason of the recent campaign. We can testify as to the present illustration given by Dr. Donaldson, which also obtains in Philadelphia, in particular with respect to the painfully nefarious, pernicious activities of some of the public health nurses. Nurses are discounting the doctors in Philadelphia for their ability and willingness to do this diphtheria work.

One man, in 1907, secured $20,000,000 from the Pennsylvania Legislature to institute a splendid antituberculosis campaign, and later Trudeau fully established the fresh-air treatment for tuberculosis. In so many instances it resolves itself in the one-man idea, in the Moses to lead us from the wilderness. He must be a man imbued with the fire of that vision. He must be a man in favor with God, with man, and with the politicians. I verily believe that we can accomplish much by trying to educate the politicians, and I mean now the politician in the ordinary sense of that term. He is the man who has his finger on the public pulse; I do not say where his hands are, but that man is in contact with the lay public and we can sell a man of our organized group of politicians, if you please, on the matter of clean water, pure food—and even in New York, may I say pure milk. If we can sell these politicians on the protection to life that can be secured in easy manner by attacking the foundation sources of disease, then we will have accomplished much. Franklin Roosevelt has the right idea, referred to this morning, and as he has repeatedly referred to it in his writing and radio speeches.

Why is it that preventive medicine has received such an impetus in recent years? I think we can trace it back to the by-products of the war, in this way: The boy from the country who was inducted into service was given his antityphoid injections. He received something more than an injection into the arm; he had a wonderful stimulation to his gray matter. The matter of the care of the drinking water revealed much to that young man. The green light on venereal prophylaxis revealed much of sanitation and hygiene and preventive medicine to that young man. The war over, the young man went back to his habitat, with what? A bigger vision, a broader outlook than he ever had before and the young man discharged ten years ago from the service is now the active man in his community because of the worship that always exists in respect to the man who has served his country and, perhaps, has been wounded. Therefore, the American Legion members as they go on in their work are spending their time not all for compensation and for hospitalization of the tuberculous and the neuropsychiatric cases, but the individuals here and there, the men in the smaller communities have demanded and are securing those conveniences of life, those precautions to health that they have found in effect and in force with such splendid results while they were in the United States Government service. That, I think, is one explanation why preventive medicine has obtained such an impetus in the past few years.

I am frank to say that the medical profession has not been alive to its opportunities. In business and in everything else the law of supply and demand is trite but very true, and this is so in medicine. The law of demand on the part of the lay people for protection to health, and particularly to the children, has been a challenge given to the medical profession but not responded to by all of them. We have been remiss. Education, therefore, of the growing generation in medicine and an intensive campaign carried on by the men with vision who are in authority in the various state societies should be continued for all time. There is the sacrifice of money, of time, of domestic comfort on the part of any man in active life. The investment of that is his tribute to his day and generation, so that when he lays down the activities of life he may have the assurance that he has tried in his own humble way to advance the best interests of the public.

It has been my pleasure to use some alliterations in my talks before county medical societies and one has been that of colleague not competitor, coöperation not competition; constructive criticism always, destructive criticism never. We should carry the message to our county societies and therein lies the great responsibility upon the men who are in active office and traveling through the states to visit their county societies. As referred to this morning, the state officers should visit the county society for the purpose of counseling and for the purpose of checking up, and may in round table conferences inform the officers of the county society what the reaction through the state is on any activities they may have, whether they are good or bad. I have in mind one county society that was quite antagonistic to some state medical policies. I visited that county society and met a group of the men at the dinner before the meeting and called their attention to the reactive effect and influence that their attitude had against the whole medical society, on the proposition that they were all out of step but Jim, and I was talking to Jim. Because of that talk and carrying to them testimony from other sources, they revised their previous attitude and now all is harmony there.

I hesitate to use the word "specialist" to laymen because the term specialist has come into a somewhat opprobrious use because of the wide acceptance of a certain small book, but my thought would be that in our preventive medicine work we should not go to the specialists. I think I am safe in saying that a specialist is a narrow man, unless he had been in general practice for over ten years. I do make the charge that the specialist of today, going from the college halls, through a hospital, and then with or without a special course afterward, is a narrow man. We shall, therefore, have to go back to the man who has had that seasoning of experience that comes only to him who has been willing to serve as a general practitioner. In him today lies our hope for preventive medicine.

Dr. Ross: I think we should recognize that the editors may have their fingers on certain things which the rest of us do not know. I will ask Dr. Hammond to discuss this subject.

Dr. Frank C. Hammond (Philadelphia, Pa.): There are two aspects of the discussion to which I will refer. Dr. Vander Veer has considered his topic from three angles, the first being the medical profession, which, as he truly states, "has grasped the changes that are taking place, more slowly than the

public." The truth of this statement is being daily impressed upon us. It has been very forcibly brought to our attention at the divers meetings of this Conference, more especially the one held at Atlantic City last December, which was one of the best we have had. The transactions of that conference will appear in full in the February number of our State Journal, with a special editorial urging all of our members to carefully read it in its entirety. If they do they will obtain much primary instruction, that will make them better understand and more readily grasp the topic of discussion at the session of the conference being held today.

The public is being educated to the problems under discussion, ahead of the doctor. It is only by iteration and reiteration that we can hope to make the physicians realize what it is all about. Those physicians who keep in contact with their county and state societies, and read their State Medical Journals especially, will profit by the continual instruction received, and should better maintain their strategic position in the community. Unless the doctor keeps in continual touch with these problems of organized medicine, brought to his attention by his medical journals, county, state, and national associations, through their councilors, committees, and other subdivided groups, he will fail miserably in the scheme of preventive medicine. The doctor, therefore, is the primary consideration for instruction.

What is to be the place of the private physician in the future scheme of personal and public health?

Are preventive health measures making any serious inroads on the yearly income of the private practitioner?

An erroneous idea seems to be abroad that there is a fundamental difference, if not an open quarrel, between physicians engaged in private practice on the one hand, and, on the other hand, public health workers and lay organizations interested in promoting public health.

Public health and personal health are irrevocably dependent upon the watchful care, the diagnosis, and faithful services of the family physician. National, state, and local public health administrators are the first to realize that no persons and no agencies can take the place of the family physicians, and lay organizations interested in promoting public health are the first to recognize that the family doctor is the keystone of the structure of public health.

In years gone by the physician was one of the few educated persons in his community. Today college and university trained minds are so universal that the physician's mentality is matched on all sides by those around him.

Physicians have always been sincere and of help in the application of preventive measures and have applied them for generations, but these measures can no longer be carried out by the physicians alone. To reach all the members of the community, it would seem that mass measures must be applied by the health department. Many physicians have been practicing curative medicine, having little knowledge of preventive medicine. Hence either the health department or a voluntary agency takes the initiative in the program of preventive disease.

There has been much unjust criticism on the part of the physician in regard to the encroachments on his practice as a result of active interests of the local public health department as well as of other health organizations. The officers of medical societies may be leaders or followers, and in the matter of preventive measures they must be leaders.

The question is frequently asked, outside the medical profession—can medical societies assume the leadership in matters of local public health? The reply is the mere fact that a county medical society goes on record as saying that it wishes to assume leadership in public health, which, however, has little significance unless the society is ready to engage some thoughtful and unbiased person to devote the major portion of his time to obtaining facts, and it is problematic how many county medical societies can afford this overhead.

Fees that have been missed by the physician as a result of public health activities in the main is his own fault, because he has not been willing to himself perform the duties necessitated by public health measures, hence some public health officials openly or tacitly express a lack of confidence in the extent to which physicians are coöperating with them; and some tactless agents of private health organizations disparage the family physician.

The physician must realize the integral rôle he should assume in preventive medicine, that his training makes him the logical backbone of any public health program, and that state and local medical societies, state and local lay organizations, and state and local health departments have at least become established on friendly and understanding terms.

Under the second grouping, the correlating agencies, Dr. Vander Veer includes news agencies and lay magazines, which "when properly guided through a relationship between the honest doctor and the honest lay unit can accomplish more than the medical unit in this day and era." This is very true, and opens up for discussion the question of the acceptance of advertisements of proprietary remedies by these publications. I saw recently in a newspaper a two-column article on tuberculosis, prepared by the State Department of Health for the newspapers of that state, and flanked on either side of the article were featured the advertisements of several vaunted cures for pulmonary tuberculosis. Newspapers and magazines are prone to give much publicity to medical matters, other than syndicated articles. It is natural and regrettable that erroneous statements frequently appear in these articles. It is unfortunate that there is no physician on the newspaper or magazine staff to edit its medical news.

It is most unfortunate that the public is misguided by the extravagant language of newspaper publicity. The public should be informed of the advances made in the sciences, and in order that the publicity relating to the achievements of medicine may be properly released, a medical censor or adviser for the lay press dispatches would not only ally the better newspaper interests of the country with true professional science, but would serve to distinguish the decent and self-respecting newspapers from those very indecent and nonself-respecting publishers who, body and soul, are owned by their quack advertisers. Not only would the censor save the newspapers from making most ludicrous and stupid blunders in their desperate attempts to report medical events, but he would prevent the outrageous ignorance from becoming more deeply jammed in the minds of the public by the authority of the newspaper.

Usually the medical chroniclings of the daily press are in about equal degree humorous and nauseating to the medically educated man. For very self-interest why do not these "educators of public intelligence" learn to do their work better? Every now and then a press account is to be seen describing how "the eye is laid on the cheek" in order to remove a foreign

body, or describing the extraction of steel from the eye by a magnet, "as the eye came nearer and nearer, the magnet, attracting the bit of steel, drew the eye from the socket." The newspaper is bound to draw the eye from the socket in some way or other, and it is in exceptional luck when at one swoop it cannot do so in the case of both patient and reader.

It is surprising the number of so-called best newspapers that accept quack advertisements. In the editorial columns of our State JOURNAL we have suggested on numerous occasions that each county society in the state make an attempt to have the lay publications in their respective counties discontinue accepting quack advertisements. (We do not know of any county society that has taken any action of this kind.) The gullible public is easily influenced by such advertisements and does not for one moment stop to consider the incongruity of nefarious articles on public health matters appearing on the same pages with such advertisements. Here is presented a big field of endeavor, and an important one in the topic before us for discussion.

Then, too, there is the vicious radio broadcasting on matters pertaining to public health, that must be offset by the various agencies interested in the public health program. We have had for a discussion before this conference this very vital problem, but so far without a happy solution.

DR. HENRY O. REIK (Atlantic City, N. J.): I had the privilege of reading the three papers before coming to the meeting and am in hearty accord with the sentiments generally expressed. I have been even more pleased by some of the discussion offered, particularly by that of Dr. Ross and Dr. Hammond.

Before discussing the papers proper, I wish to mention my satisfaction, and to congratulate you, Mr. Chairman, upon one particular point, and that is the denial that there is or has been an onslaught upon the medical profession by the public. I know we sometimes feel that way when special bills are introduced into the legislature or a magazine editor publishes some article that gets under our skin, but I see no serious evidence of any onslaught.

I also discount the articles about the "loss of prestige" on the part of the medical profession. I do not know any community in the United States in which the doctor of today is not what he has always been, practically the leading citizen in that community. I think the profession holds as much of a position as it always has. We have recently developed a sort of inferiority complex and I am glad that particular point was brought out for we should shake it off. We have heard a good deal about the efforts that have been made in recent years for coöperation and the progress made, particularly as expressed by Drs. McBride and Morrison, in regard to New Jersey—which is the territory with which I am most familiar. I wish particularly to speak of some of the reactions that I have gotten from serving as the coöperative agency. As I look back, we have made a tremendous advance. Five years ago, in so far as our dealings with lay medical organizations were concerned, we were in a state of controversy rather than coöperation. Today, I think we can safely say there is not a single lay organization considering medical problems in New Jersey with which we are not on a basis of coöperation.

But, I think that is scarcely enough. We have made progress. We have gone far; we have reached a stage now where the public is willing to coöperate with us and we are willing to coöperate with the public. Doubtless that is just as true in New York and Pennsylvania as in New Jersey but, if I sense the situation correctly, at this moment we are rather marking time. The public is waiting for something from us and we have regained that opportunity which we had possibly lost, or at any rate had neglected, as referred to by several speakers today, for *leadership* in public health matters. We have the opportunity today to grasp that leadership and my answer to Dr. Vander Veer's question as to how we can most effectively coöperate in the matter of public health progress would be, that we should add a qualifying word now as to this question of coöperation and perhaps call it a *leadership coöperation*. We found ourselves in the embarrassing position of necessarily approaching lay organizations with a request for coöperation, taking up their programs and trying to rearrange and readjust them and adapt them to the medical profession. We have done well, but has not the time come for assuming the leadership, establishing a program, and asking the lay organizations to coöperate with us? I think that is what they are expecting. Someone must give the command for a new advance and that command should come from the medical profession.

Dr. McBride spoke of the general progress made and the general policy in New Jersey as regards coöperation. I would like to see that policy go just a step further, and I believe if we take that step it will cure some of the other things we have spoken of, especially the concrete examples of troubles that arise such as Dr. Donaldson mentioned. Those concrete conditions can be changed if these health programs emanate from the county and state societies instead of coming from some lay organization and having then to be adapted to the family doctor.

Perhaps I have reached that age of becoming a dreamer, but I am rather interested in finding that I am not dreaming so much of the *past* as I am of the *future*, and what I have in mind is a vision for coöperation in this work that will embody a strong central state medical society, with strong component branches, working from definite central headquarters, a medical center we may call it, from which shall emanate all these educational programs. We are convinced, I think, that education of the profession and of the public, in health matters, must go hand in hand. The profession needs it quite as much, possibly more, than the public does at the moment, but the two programs should be carried on simultaneously and the only way to accomplish that is to have them come from the same source. With this same central organization and component branches, the representatives of the state medical society with their vision of what we can do in the way of disease prevention, with a specific program, such as Dr. Ross has requested, to be prepared there and disseminated from that point so that the same program shall go out to the profession and to the public in all their ramifications, in newspaper articles, in broadcasting, and speeches from the various organizations, can accomplish a great deal. This should be controlled by a council, committee, or individual at headquarters with a vision, or perhaps better still with the ability to receive and comprehend the visions of others and to transmute them into action. Such an executive, in order to keep his finger on all of these points, would have to do some of the things that Dr. Morgan spoke of, although I do not quite comprehend how a man can keep in favor with the politicians and with God at the same time; that is the hardest task I have heard proposed. I do visualize, and I believe

the officers of the Medical Society of New Jersey have something of the kind in mind, such an organization as that. We have a better opportunity in our state to do this than most of you have; with a small, compact state, only twenty-one counties as against your sixty-four or sixty-five, in each of the other two states, and with strong working organizations in each county. With strong headquarters we could prepare and disseminate such a program as some of you have spoken of and as Dr. Ross has asked for. I believe it is high time to work toward that end in each state, and that our coöperative plan for the future should be no longer trying to find out what the public wants, for we know that, and we know to what extent the public is willing to coöperate, but a definite program should be established and the public asked to coöperate with us. I believe if we take this opportunity we will regain whatever we may have lost, or think we have lost, in the past, of prestige and domination and once more be the *real leaders in all medical affairs.*

Dr. George M. Fisher (Utica, N. Y.): The subject which has been before you today is one of peculiar interest to me because it was in my term as president of the New York State Medical Society that we organized what is known as the Public Relations Committee. It is now doing active work. The subject before us today, the relation of the physician to the lay organizations, reminds me of that familiar similar wording, united we stand, divided we fall, which applies here also. Years ago, as physicians, we got beyond the idea of working absolutely independently and not recognizing the lay organizations. It has been my good fortune in the last four or five years, since my retirement from the presidency, to be in personal coöperation with the State Charities Aid Association and I believe we have as strong an organization in central New York as anywhere in the state, aside from Suffolk County which our good Chairman represents. To show you the coöperation which exists between the physician and the public, the State Charities Aid Association of our county makes no move without our advice or having a meeting with us. Now when you gather around a table and can talk with a lay organization you certainly are supposed to have some good advice or they would not ask you for it from time to time.

We have recently established in our county a move for a million dollar tuberculosis establishment. Only one hour before I left home I had a consultation with the executive secretary of the State Charities Aid Association, a representative of the Tuberculosis Committee and our health officer, and we outlined our plans. By the way, we stand among the big eight in the list of cities that are ahead in that work. We organized a plan to carry on with the aid of the Tuberculosis Council a continuous antidiphtheria program through the coming summer, immunizing all the children in the state and as far as possible outside. Now we as physicians cannot do that alone. We must have a lay organization to advertise and push the campaign throughout the counties. It is said the physicians lay back on the work. They do, but the physician is not to blame, because he is generally a busy man, and the one who is not busy will not be interested. We are carrying on a plan in Utica, in coöperation with the Tuberculosis Committee, of taking care of the parochial schools which have never entered in on this plan until this year. It was through the work of the Public Relations Committee and the State Charities Aid that this program was started.

If you will get your public relations committees active and coöperating with your lay organizations your work will simply roll along. The trouble usually is lack of coördination.

Dr. Joseph S. Lawrence (Albany, N. Y.): The tone of all the papers and discussions, I say with pleasure, has not been so pessimistic as I have been accustomed to hear when this subject is under discussion. That, I take, to be a splendid indication. Evolution in medicine cannot be expected to be any more quickly accomplished than evolution in any of the other professions. If we go back to the history of architecture we will find that leaders in architecture were not appreciated as such by their generation. Leaders in music lived their lives before they were ever discovered to be leaders, and the same is true in regard to painting. Medicine is an art as well as a profession. We have ideals and we are striving for them and this morning I realize as I hear you men talk that we are achieving them, in a measure, although it is in only small groups or through scattered individuals. We must consider that the change we have in mind is a deep seated change, as Dr. Morgan pointed out. Even in our own lives we were taught a medicine that was curative, that was founded primarily on pathology, and now we are trying to talk of another type of medicine, not pathology but physiology. We do not wait for the pathology. That is very revolutionary if you stop to think of it, and practitioners are busy men; they cannot reason, they are too busy drawing upon their immediate resources as they were taught to store them up and use them, and they are too busy to meditate on a different way of solving their problems. We must be tolerant with that condition if we expect to get anywhere. We are unfortunate in one sense because we live in this particular age, for we have back of us the example of what can be done by an army, and the lay folk have the same example in mind and therefore we grow restless at times; we are impatient and think we should do this all in a minute, and that cannot be done.

We speak of the county society as leading in these things and I share that feeling, but recently I made a study of our state to see how many health officers of the 800 or 900 we have in the state are actively leading in their county societies and I found that twenty-two per cent of them are not even members and I could safely say that another fifty per cent of those who are members rarely attend a society meeting. How can a county society lead in any field of work if it has no representative to lead them?

Why should not public health programs be more attractive in county society meetings? I was much interested in what Dr. Sommer said about the attraction of an economic program. I have seen that a few times in my state but not universally as yet. The attractive program today, in New York State as a whole, is the highly scientific one. I had the opportunity on Tuesday night of studying an audience on that particular subject. They had two speakers that night. I was one and spoke on antidiphtheria. I was asked to speak first because the man who was to speak on a scientific subject had not arrived. They listened, at least they had their faces pointed in my direction and had their eyes open, but I had the feeling that they were waiting for Dr. Donald Guthrie who would tell them about intussusception. He gave them a splendid paper and they entered into the discussion of the subject in a most interested manner and yet I wonder

whether twenty per cent of those men will ever see conditions such as he spoke of that night. They were rather enjoying a scientific atmosphere, which after all is very attractive. When we are selecting persons to represent us in our state organizations how many times do we go to the highly specialized man, specialist not in the narrow sense? We select our very prominent surgeons and physicians to represent us, not our prominent health workers. That, I consider, is one of the answers to Dr. Vander Veer's question. If we can in our own group produce a vision that will attract men toward public health we should do it and not let public health be a side issue as it was on that Tuesday evening I mentioned. I think that is contingent upon our interpretation of medicine. Is the profession of medicine really and truly to serve the public, or are we to serve ourselves as members of the profession? Are we to advance ourselves or to increase our opportunities to serve the public? I have in my mind, very clearly pictured, prominent surgeons who have built up magnificent hospitals, who are doing splendid work and with whom, if I correctly interpret their mental make-up as I talk with them, the public has but ten per cent claim. Their prime idea is to build an enormous hospital and to conduct the work in it themselves; but whether the community needs it, whether it is serving the community as an institution, is not given consideration. The chief consideration is to have a big operating room, do big operations, and have an appropriation to carry it. That is one particular reason why the cost of medical care has the ring that it has at the present time. The first question one who is ill must ask is—how much will this cost me? I do not like that title, the cost of medical care. It is giving the public a wrong slant and I do not believe the public would naturally have thought of it in that way.

Our public health programs, I am aware, are in so many instances one-sided. The layman, an active, enthusiastic person, who has given a lot of thought to it, sees it from his point of view, and the physician who is called in so many times takes the arguments that are presented at that time. He does not come as well prepared to discuss the subject as others. I have been mortified at times to hear the contributions that are made by medical men to the consideration of public health problems, at which there was a mixed group discussing them.

In my attempt to offer an answer to Dr. Vander Veer's question, I would say that we must have leaders in our own profession and they must be outstanding men with a vision, with wisdom, and who will be willing to spend the time that is necessary to make themselves a part of the public health program in which they expect to figure. They cannot come in and go out again and leave their heavy words of wisdom to be silently digested. We must take that same position in our county and state organizations. It is a serious matter and it is not a matter in which we have inherited a position; we have got to earn it and it means a lot of hard work.

Dr. William H. Ross (Brentwood, N. Y.): I wish someone would write five hundred words summing up this conference at this point. Among the interesting things that I have read recently was the request of some group asking ex-President Coolidge to write the history of the United States in five hundred words for inscription on the stone face of a mountain in the West. If we could sum up what has come out here concisely and accurately enough so that it could be a text that we could take with us, we could make so much of it, so much more than we can if we have not a clear-cut idea. I am not impressed with anything greater in medicine than the lack of this. We should know many things in common. If we meet the doctors at intervals, with some distance between, it is interesting to see the diverse conceptions of the problems that confront us. That is one of the most striking things of which I know. It is like going into a new age. In Courtland County if one gets an impression, which of course is the cross section of what the doctors are thinking about, that is definite; fifty miles from that place one will get another impression, and fifty miles from there, still another. The supervisors in one county have stated that they are going to organize a county health department, and the doctors have not yet caught up; the procession is going so fast toward establishing a county health department that the doctors have not quite gotten ready to pass their resolution endorsing it. That is a tremendously complex thing. I think it is time that we should formulate some kind of a policy and state it so clearly that we could advertise it to the public in the ways that we can advertise, using that term in the very broad sense.

Now the value of this conference is one of the most striking things because there have been contributions to the various angles of this one question. It is very remarkable and rather an interesting thing. Every one has seen this problem, therefore there must be just this situation. No one has said that it is not true, therefore we have the right conception.

Dr. Fisher spoke of the Public Relations Committee. I wish to add that in New York this is a tremendously active committee now. I am fearful sometimes that I will get into trouble by saying that it is the most valuable committee in the state of New York.

The discussion this afternoon should gather up the loose ends of the points brought out this morning. We evidently settled by general agreement many details regarding coöperation. Now, we can add something to that, in an interesting report to the Industrial Commissioner of Labor, the Honorable Francis Perkins, referring to Workmen's Compensation; it is a somewhat interesting thing which we shall wish to read at some other time. I think, however, if you are willing, we will ask Dr. Lawrence to read it now. (Paper read by Dr. Lawrence.)

Afternoon Session

After some discussion of the letter referred to by Dr. Lawrence, attention was given to preparation for the next meeting.

Dr. Morrison: I have a definite proposition to place before you. After hearing these papers and the discussion touching upon health matters, I wish to offer a resolution, that this body appoint a committee, to be composed of Drs. William H. Ross, president-elect of the New York State Medical Society; Frank C. Hammond, editor of the Pennsylvania Medical Journal; and Henry O. Reik, editor of the New Jersey State Medical Journal; to draft a suitable memorial on how the state medical societies may govern public health matters, and present it at a subsequent meeting of this conference.

This motion was duly seconded and approved.

Dr. Sharpless: The members of this conference from Pennsylvania wish to invite you to meet with them in May next. I presume Philadelphia will be the most convenient place and we shall hope to have the honor and pleasure of entertaining you in May.

Dr. Ross: This meeting has come nearer to hewing to the line than any that I have known and I believe it is because we decided to advance the subject that we would discuss. Frequently we have had papers presented and sometimes we have not had concerted opinion as to just what the subject should be, therefore, with the result of this meeting clearly in mind I think it would be well to decide the subject to be taken up at the next meeting. If we know what we are going to talk about we will get nearer to finding some solution of the problem than if we cast about hunting for a solution to fit some problem that comes up later, or to discuss two or three problems. We have come closer today to having everything headed up under one subject, with the exception of the introduction of one extra subject this afternoon. Therefore, if we could decide in advance what we are going to discuss I believe it will be far more profitable. This is not a medical meeting in the ordinary sense.

Dr. Fisher: The A. M. A. is bringing out the project of periodic medical examinations and, as I recall, there has been no discussion of that subject whatever by the Tristate Conference.

Dr. Dougherty: Periodic health examination is a very important point of economic medicine today. As the chairman has said, New York State has a very active committee. I know to my sorrow that he gives us a lot of extra work to do and we expect to be even more active. I should like to say one word about what New York City has done and I think it would be a very proper idea if we could get some one from our committee in Greater New York, from these five county societies, to give in detail to this conference the work that has been done. We started last year by appointing a committee to work in conjunction with committees from other county societies and they have done a remarkable work. Their advertising, their publicity, has been wonderful to those who looked on, especially to me as director of activities of that county society. We have spent $30,000, which was not contributed by the county society; the Life Extension Institute gave us $12,000, the Metropolitan Life, $10,000, and so on. Yesterday afternoon they had a meeting and laid out a scheme of work for the coming year, the issuing of a bulletin, the continuance of education of the newspapers, placards in the hotels and shop windows, etc. They have done a very active work and it would be a good idea if you would interview Dr. Galston who has been conducting that work. I believe it would be a good idea to accept Dr. Fisher's suggestion in regard to having this subject discussed, and requesting a paper from Dr. Galston as a starting point. In this way you might gain considerable information and work up some structure on that basis.

Dr. Morgan: This is a good suggestion and a very practical one. The Medical Society of Pennsylvania espoused this five or six years ago but it has not been a howling success. The general plan of organization is there and I think the time is now ripe for reactivation of the subject. I am sure that we would coöperate with the conference in carrying out the general thought.

Dr. Reik: I believe this is an opportune subject to discuss but it has been before the conference once before. The second conference was devoted to that subject and to graduate medical education. That was four years ago, so there is no reason why it should not be taken up again, but I wish you not to be under the impression that it had not been discussed before.

And to you, Mr. Chairman, may I say that the subject considered today was not determined at the last session; it was by vote there determined that the program should be left to the officers of the New York State Medical Society, and Dr. Vander Veer selected today's subject only about three weeks ago.

Dr. Ross: You are quite right, Dr. Reik, I remember now that we discussed the matter and then voted as you say.

Dr. Lawrence: Heretofore the selection of the subject always has been left to the host.

Dr. Ross: I believe, however, that is a wrong system. Whatever defects this conference has had, have come because we have not had a planned program common to all of the states represented. If we could do this I believe we would get very much farther. To leave a program to one state to decide upon and have the others go there and join in seems very much like a medical meeting. I should like to see the system, by which the host has the authority and the right to select the program, broken up. I should like to see the general question determined beforehand. I know that Dr. Reik is perfectly correct in what he said, and so far it has turned out very well, of course, but that does not mean that it would do so the next time.

Dr. Dougherty: We should have in this conference accredited representatives. I am the only officer of New York County present and I think there should be some way in which accredited representatives could attend this Tristate Conference.

Dr. Morgan: We are all representatives of our state societies. You are one of New York's representatives.

Dr. Dougherty: I do not represent anything.

Dr. Reik: This Tristate Conference is composed of the presidents, the presidents-elect, the secretaries, the editors, the executive secretaries, the ex-presidents, and the chairmen of the board of trustees of the three state societies. They are all regularly invited and if they do not come that cannot be helped.

Dr. Dougherty: I have never heard of the trustees attending.

Dr. Morgan: That motion, to include the chairmen of the trustees, was passed during your four years' absence, Dr. Dougherty.

Dr. Ross: We might select the major subject today and then if a minor one came up later which deserved discussion at the meeting in Pennsylvania that might also be presented.

Upon motion, duly seconded and carried, it was decided that the subject for discussion at the next meeting of the conference would be Periodic Health Examinations.

Henry O. Reik, M.D., *Secretary.*

The well-trained, properly equipped, experienced general practitioner of ability, character, personality, is a fundamentally valuable person. He is a good diagnostician. He sees his patient as a whole. He knows his peculiarities and circumstances. He can decide when to refer him to a specialist and when to protect him against the very real danger which is threatened by a narrowly specialist point of view.—*Ibon.*

TUBERCULOSIS ABSTRACTS

A Review for Physicians

PREPARED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Published through the coöperation of the Pennsylvania Tuberculosis Society and the Medical Society of the State of Pennsylvania

CURRENT medical literature reflects a widespread interest in childhood tuberculosis. Practitioners are realizing the importance of recognizing the disease in its early stages while it is yet possible to curb its insidious extension. *Tuberculosis in Children* by J. A. Myers, which has just issued from the press, limns a clear and homogeneous picture of this complex subject. It describes both the childhood type and the adult type of pulmonary tuberculosis as well as nonpulmonary tuberculosis in children. Long experience as chief of staff of Lymanhurst, in Minneapolis, America's first school of its kind for tuberculous children, gives perspective to Dr. Myers' observations and probably accounts also for those rare sparks of human sympathy which pervade the book, from which the following briefs have been abstracted.

That pulmonary tuberculosis as commonly seen in the adult is preceded by a developmental stage, vaguely designated as the "pretuberculous stage," which is more or less concealed or latent, has long been appreciated. Confusion has arisen out of such synonymous terms as infantile, juvenile, tracheobronchial, hilum, primary complex, Gohn's tubercle, employed by various writers to designate this stage. This confusion is largely dissipated by the definition adopted by the American Sanatorium Association in 1929, and to which the author subscribes; namely, "Childhood type of tuberculosis is the term used to describe the diffuse and focal lesions in the lung and adjacent tracheobronchial nodes that result from a first infection of the pulmonary tissue with the tubercle bacillus." Roughly, the distinguishing feature between the childhood type and the adult type of pulmonary tuberculosis is that the former represents the reactions of the bacillus on virgin or nonsensitized soil and is characterized by cell proliferation, while the latter is in the nature of a reinfection on sensitized soil and tends toward destruction of tissue.

Tuberculous lesions of the childhood type. The mother of this child died a few months after the picture was taken.

Wide Variety of Lesions

How the body will withstand the initial infection is determined largely by the dosage of the bacillus and, to some extent, by anatomical differences dependent upon the age of the individual. The resulting pathology may vary widely from a rapidly progressive, disseminated, miliary involvement to a single, small, inconspicuous nodule. A rather typical or common form seen in children of the school age is that in which the initial lesion may appear anywhere in the lung but most commonly at the periphery, followed quickly by an involvement of the lymph nodes draining the infected area. Coincident with this first encounter of the body cells with the tubercle bacillus, the entire body becomes sensitized or allergic. The primary lesion may be so small as to escape detection by the x-ray. The lymph nodes which have become enlarged, later caseous, and then calcified, cast definite shadows on the x-ray film.

Symptoms and Physical Signs

The diagnosis of childhood type of tuberculosis is not complete until the extent of the involve-

ment and its progress have been determined. A history of exposure to tuberculosis from father or mother or from a close associate is of great significance. There are no characteristic symptoms; the child may or may not be underweight, he may show signs of fatigue and occasionally exhibit a rise of temperature of a degree or two. But even these vague symptoms may be absent. Similarly, physical signs are either absent or untrustworthy, inasmuch as the pathology in early cases is not sufficient to give rise to characteristic physical signs.

Two procedures, however, enable the practitioner to make a diagnosis: the tuberculin test and the x-ray. The tuberculin test determines infection. Myers recommends the intracutaneous technic, not only because it is more certain but also because the variations in the reaction give some clue as to the extent and activity of a tuberculous process. This test should never be omitted, even in older children. The x-ray pictures the lesions, particularly those that are calcified. No examination for suspected tuberculosis among infants and children is complete without this aid, though a negative x-ray does not necessarily rule out tuberculosis; miliary disease may progress to a fatal outcome while yet the x-ray picture is clear; and focal lesions in the parenchyma and the hilum may be so small as to cast no shadow.

Close Contact the Important Factor

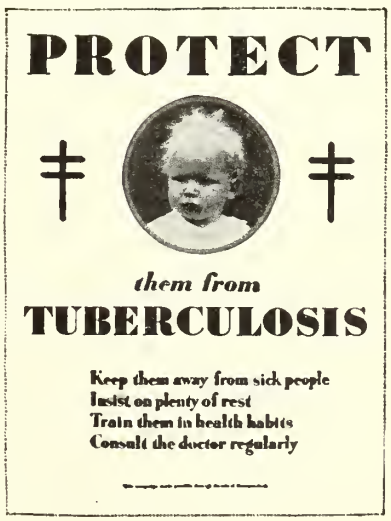
The author discusses at length the etiological factors, with special reference to the communicability of the disease. The idea that tuberculosis is inherited is, of course, no longer tenable, but the observation of the older writers that "tuberculosis runs in families" is confirmed and explained on the basis of early infection through close contact with adult members of the family. Drawing on his rich experience, Dr. Myers cites numerous cases to illustrate the need of ferreting out the source of infection; for example:

"A student nurse was diagnosed tuberculous in September, 1927, and placed in an institution, under treatment. This fall, she is resuming her training. An older sister was examined, and although she did not have the adult form of tuberculosis at that time, there was unmistakable evidence of the latent childhood type in her chest. What was the source of exposure? The older sister was inclined to believe that she might have developed the disease through intimate contact with her sister. This did not seem probable, however, since her disease appeared far older than that of her sister. According to the history, there had never been a case of tuberculosis in their family. In August, 1929, we were asked to see the mother, who had been brought to a hospital. She had frank pulmonary tuberculosis with bacilli in the sputum."

The Teen Age

During the teen age, tuberculous lesions of the adult type begin to appear with greater frequency. They may be seen in all stages of development and retrogression. Evidences of tuberculosis in children, however slight, must never be ignored, for though immediate danger may not seem to be imminent, a serious outcome is likely to follow unless prompt treatment is instituted. In general, the treatment consists in preventing further exposure of the child to tubercle bacilli, together with common sense hygienic care, as epitomized in the poster illustrated.

During April, 1930, tuberculosis associations throughout the country are calling to the attention of the public the importance of discovering tuberculosis in its latent stage in children. More than five million pamphlets will be distributed; two hundred thousand posters like that illustrated and six thousand billboard posters will be displayed. Newspaper articles, lectures, motion pictures, and many other publicity devices will also be called into play. For physicians who desire it, there is available a 32-page brochure on "The Childhood Type of Tuberculosis" by Chadwick and McPhedran. It treats of the diagnosis, prognosis, and treatment of the condition, describes the technic of the tuberculin test, and interprets the reactions by means of color plates. There are six excellent x-ray pictures reproduced by the "aquatone" process, with interpretations. Ask your tuberculosis association or the Pennsylvania Tuberculosis Society, 311 S. Juniper St., Philadelphia, for a copy.



THE MEDICAL SOCIETY
OF THE
STATE OF PENNSYLVANIA

Officers' Department

WALTER F. DONALDSON, M.D.
Secretary
8063 Jenkins Arcade Bldg.,
Pittsburgh, Pa.

CONTRIBUTIONS TO MEDICAL BENEVOLENCE FUND

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Lancaster County Medical Society ...	$30.35
A Friend (Allegheny County)	5.00

COUNTY MEDICAL SOCIETY REPRESENTATION ON GOVERNING BOARDS OF LAY HEALTH ORGANIZATIONS

The above is the title under which Dr. Harold A. Miller read his paper, published in this issue of the JOURNAL, before the 24th Annual Secretaries' Conference at Harrisburg last December. Dr. Miller, who has had many years' experience in teaching and practicing obstetrics, has also had a broad administrative experience with lay health and welfare organizations. A reading of his brief article will convince one that he has put into practice certain of his theories in at least two such organizations which he has served as a member of the governing board. Many will no doubt agree with Dr. Miller that in such welfare organizations the president and secretary of the county medical society should be voting members of the governing boards, and that in every instance where clinical work is included each attending physician should receive some remuneration for his services. Dr. Miller recommends medical members on governing boards of such organizations in order that the latter may not further confuse the public, decrease their own efficiency, or increase economic waste. We have noted recently that the medical societies of Berks and Chester Counties have been directly related to certain lay health organizations of their respective counties, and we hope that similar relations will soon be established throughout the State.

SOCIAL SERVICE ORGANIZATIONS VS. PHYSICIANS*

HAROLD A. MILLER, M.D.
PITTSBURGH, PA.

An adjustment of existing relationships between certain social organizations and the organized medical profession is necessary. The subject is discussed freely by small groups of medical men, and often in a way which to the writer seems to show but little understanding of the problem. The governing boards of such social service organizations receive their information largely through their executive heads, who, in turn, are largely informed by the workers in the field, hence the frequent failure of such executive boards to evaluate fully the enormous amount of service contributed by the individual members of county, state, and national medical societies.

In the beginning, social service work was suggested by members of the medical profession in order that laymen might become acquainted with the need for group protection against disease, the need for family coöperation in the effort to limit disease to the affected person, individual effort to avoid disease or disability, and that convalescent care might be given until the patient was restored. Managing boards composed of laymen were found to be advantageous in assisting to prevent and correct social injustice where it complicates sickness and restoration, as well as to provide the necessary funds. Such work is attractive to lay men and women, and from a small beginning in Pittsburgh, we had in the year 1927, one hundred and eighteen listed organizations, and if all existing organizations were listed it would be expanded to about two hundred (Wilbur F. Maxwell, executive secretary, Welfare Fund of Pittsburgh). Thirty-one

* Read before Secretaries' Conference, Harrisburg, Pa., December 3, 1929.

of these organizations, willing to have their budgets supervised, accepted the coöperative direction of the Welfare Fund Committee. A few remained outside the Welfare Fund, giving, what seemed to them legitimate reason, for so doing; but in the case of one hundred or more organizations we are left to speculate as to the reason.

It is to be hoped that as new problems present themselves and new groups become interested in such problems, they will recognize the advantage of linking it up as a department of some existing organization; or, if the problem be a hospital one, establish the necessary foundations in one or all of the existing "Class A" hospitals. If this be done, the work may be continued long after the enthusiastic founder has passed away, and not become another stone in the graveyard, which even now contains the last remains of many worthy charities which have followed their founders to oblivion.

The number of workers who are members of the Social Workers' Club in Pittsburgh is between 350 and 400. To this we may add a reasonable number engaged in social work, who are not members of the Club. The total number of social workers in the City of Pittsburgh is estimated at 800, with an annual budget of $3,200,000.

In the writer's observation, most new social agencies were deemed necessary by the organizing group, but others were founded to bring social prominence to the founder and his or her associates; some, as the result of a split in an already existing organization; and some were founded by enterprising physicians to promote their own welfare, although ostensibly to assist the deserving and needy. Many were acting independent of the others, and in one instance known to the writer, three social workers called at one home in a single day, all giving different advice and leaving the patient in a bewildering maze.

As competition grew, new and attractive lines of salesmanship had to be developed. Some representatives vaccinated by giving pills or powders by mouth; others, by the accepted method. Blood-pressure observations offered an attractive field, and assured a superior knowledge. Urine analyses were made, with reports to the attending physician or clinic at times, while in other instances their interpretation and the subsequent treatment remained within the social organization.

The physicians of today are antagonistic toward social organizations as they now operate, while admitting, as they always have, their place in health work when in coöperation with and under medical supervision. All social service organizations are dealing with health problems, whether it be the necessary readjustment of the psychiatric case, or the regulation of hours and kind of labor of the chronic heart case, or the retarded and abnormal child who may have a physical defect. Adjustment or correction of nutritional defects, disturbances of sight or hearing, foci of infection, the prevention of disease, isolation, and prenatal care are all instances in which advice and medical care, plus the tactful coöperation of the social service worker, will result in the greatest communal good and redound most to the credit of all.

The unwarranted aggressiveness of some social workers has led to an equally unfortunate attitude on the part of some members of the medical profession, who, instead of bringing to the attention of the managing director instances of unethical practice, ignore the action or dismiss the case, thus failing to correct the abuse or prevent its recurrence, and permitting the breach to grow wider and wider, while the community suffers. Many years of contact with social service organizations leads the writer to the following conclusions and recommendations:

Social service work is established on a solid economic basis ($3,200,000.00 per year contributed) in Pittsburgh, and has the moral and financial support of the well-meaning and honest-thinking citizens of the community. If permitted to continue as at present, such organizations will do an increasing amount of work yearly, being limited only by the funds the public contributes, and they will show an increasing independence of medical supervision, thereby confusing the public, decreasing their own efficiency, increasing economic waste, and ultimately bringing into disrepute and destruction agencies of great potential good.

There is a growing tendency in Pittsburgh to place social service organizations under a general or common directing board known as the Welfare Fund, or known in other communities under such names as Community Chest, Charity Funds, etc. The Board of Directors of the Welfare Fund investigates the aims and needs of any particular organization and approves only of the highest moral, ethical, and medical standards obtainable. A committee of the Welfare Fund Board, one member of which is a physician, visits the office of the member organization, investigates the kind, character, and amount of work done, as well as the cost, makes suggestions to prevent overlapping or duplication, and the medical representative is expected to examine into the medical aspect, and in this particular instance his suggestions have been adopted without exception.

In one of the member organizations (Public Health Nursing Association) a part ($2,000.00) of their budget is set aside as partial remuneration to physicians on a per hour basis for services rendered. The prenatal clinic of the University remunerates all physicians working in the clinic (except fourth-year medical students), thereby securing the services of men who have been trained in the work and, in addition, furnishing the beginning practitioner with a large clinical experience and some financial help during the years he is establishing himself.

In this particular clinic the recorded attending family physician is notified by a return postcard of the patient's application, and if a reply is received advising that the patient is able to pay, such patient is refused and returned to the family physician.

It is advisable, and should be possible, for all welfare organizations to have as voting members of their governing boards the president and secretary of the county medical society, and in every instance where clinical work is included, to have a supervising internist and the necessary specialists on the staff. Each attending physician should receive some remuneration for his service, being considered just as necessary a part of the expense as the time and labor of the director of the organization, or the superintendent of the hospital, or the social service worker, or the nurse employed. Such positions would be advantageous to the younger members of the medical profession, providing them with a vast amount of clinical experience and rendering to the patient a high type of medical service, as well as advancing the health interests of the community. As the experience and outside practice of such physicians grew, they should retire, making way for others, thereby providing a continuation of service, such as is deemed advantageous in the business world. If such conditions existed, the medical profession would no longer claim that the burden of charity placed on them involved much more than their share, but would in turn feel kindly toward all social service organizations and dispensaries, and would accept willingly their share of the actual labor and the financial responsibility, and feel, too, that they were definitely a part of the community welfare work.

COUNCILOR DISTRICT MEETINGS

We are pleased to note unusual interest in connection with the holding of Councilor District meetings of the Second, Sixth, Seventh, and Ninth Councilor Districts. Dr. Buyers has arranged for his meeting to be held in Valley Forge in September; Dr. Kech for his meeting in Huntingdon in May; Dr. Brenholtz for his meeting in Williamsport in June; and Dr. Wyant for his meeting in Kittanning in June.

PAYMENT OF 1930 DUES

On March 19, 1930, this office had received the annual assessment of 5,455 members; on the same date 1929, of 5,751 members; and on the same date 1928, of 5,707 members. The percentage of 1930 dues received at this office from the component societies on March 19 is as follows:

Juniata, 100%; Montour, 100%; Warren, 100%; Franklin, 96%; Carbon, 93%; Huntingdon, 91%; Montgomery, 91%; Berks, 89%; Lebanon, 88%; Mercer, 88%; Lancaster, 86%; Armstrong, 85%; Dauphin, 85%; McKean, 85%; Perry, 85%; York, 85%; Indiana, 84%; Lycoming, 84%; Greene, 83%; Potter, 83%; Cambria, 82%; Delaware, 82%; Lehigh, 80%; Mifflin, 79%; Northumberland, 79%; Schuylkill, 79%; Union, 79%; Butler, 78%; Clarion, 78%; Columbia, 77%; Elk, 77%; Lackawanna, 75%; Bedford, 72%; Northampton, 72%; Center, 71%; Monroe, 71%; Clinton, 70%; Bradford, 69%; Cumberland, 69%; Somerset, 68%; Adams, 67%; Allegheny, 67%; Snyder, 67%; Bucks, 66%; Luzerne, 65%; Beaver, 64%; Philadelphia, 64%; Blair, 62%; Jefferson, 62%; Chester, 59%; Venango, 59%; Fayette, 56%; Westmoreland, 55%; Erie, 53%; Lawrence, 52%; Wayne-Pike, 52%; Crawford, 51%; Tioga, 48%; Susquehanna, 40%; Clearfield, 32%; Washington, 0%; Wyoming, 0%.

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to March 15:

ALLEGHENY: *New Members*—Emilia Caprini, 114 Shetland Ave., Michael E. Kapinya, 4801 Second Ave., Meyer W. Rubenstein, 1231 Fifth Ave., George V. Foster, 5457 Wilkins Ave., Pittsburgh; John Trevaskis, 508 Penn Ave., Turtle Creek. *Transfer*—Melba M. Stewart, 333 Freeport Road, Aspinwall, from Mercer County Society.

ARMSTRONG: *New Member*—John Whann, Chickasaw.

BEDFORD: *New Member*—Thomas G. McQueen, Bedford. *Transfer*—Max S. Kaplan, Riddlesburg, from Cambria County Society.

BERKS: *New Member*—George Major, 436 Lancaster Ave., Reading. *Death*—Rufus E. Le Fevre, Reading (Jeff. Med. Coll. '00), Mar. 2, aged 54.

BLAIR: *New Members*—Fred P. Simpson, Altoona Trust Bldg., Harry D. Collett, 1207 Thirteenth Ave., Ernest J. Hoover, 810 Twenty-fourth St., Altoona; Fletcher B. Forrest, 336 Main St., Bellwood. *Transfer*—Josiah F. Buzzard, Altoona, from Cambria County Society. *Reinstated Member*—Frank Keagy, 401 Fourth Ave., Altoona.

BRADFORD: *New Member*—Robert Hugh Robertson, Sayre. *Transfer*—Edmund T. Lentz, Wyalusing, from Indiana County Society.

CHESTER: *Transfer*—Everett S. Barr, West Chester, from Philadelphia County Society.

COLUMBIA: *Death*—Ralph E. Miller, Bloomsburg (Univ. of Pa. '04), Dec. 11, aged 55.

Crawford: *Reinstated Member*—Charles K. Fercr, Meadville.

Delaware: *Transfer*—E. Marshall Harvey, Media, from Philadelphia County Society.

Erie: *New Member*—Morton W. Groves, 1123 Parade St., Erie. *Resignation*—J. C. M. Drake, Erie.

Fayette: *New Member*—Hugh J. Coll, Connellsville. *Reinstated Member*—Howard S. Reiter, Brownsville.

Indiana: *New Members*—C. L. Hobaugh, Homer City; George Martin, Clymer; Ira C. Miller, Dixonville. *Transfer*—Edward L. Fleming, Indiana, from Armstrong County Society.

Lackawanna: *New Members*—Frank G. Bryant, 1107 Lafayette St., Scranton; Joseph R. Kielar, 602 Main St., Simpson; John J. Malinowski, 1058 Main St., Dickson City.

Lancaster: *New Members*—John L. Atlee, Jr., 37 E. Orange St., Harvey H. Seiple, Lancaster General Hospital, Lancaster; Julius A. Blasser, Elizabethtown; John D. Phillips, Millersville.

Lehigh: *New Members*—Fred M. Hass, 120 Turner St., John R. Mench, 1140 Hamilton St., Allentown.

Luzerne: *New Members*—Rudolph D. Martin, 590 N. Main St., Albin J. Drapiewski, 17 Willow St., Wilkes-Barre. *Removal*—James A. Pyne from Kingston to 270 Wyoming Ave., Wyoming.

Lycoming: *Death*—Harry J. Donaldson, Williamsport (Univ. of Pa. '95), Feb. 5, aged 57.

Mercer: *New Member*—Irvin E. Rosenberg, Sharon.

Montgomery: *New Member*—George U. Pillmore, Bryn Mawr. *Resignation*—Thomas H. Powick, Pottstown.

Northampton: *New Member*—William H. Thayer, 73 W. Broad St., Bethlehem.

Northumberland: *New Member*—Joseph D. Millard, Shamokin State Hospital, Shamokin.

Philadelphia: *New Members*—Kenneth E. Appel, 408 Berkeley Road, Haverford; William K. Bhatta, 405 W. Susquehanna Ave., Leon H. Collins, Jr., 4024 Spruce St., Nicholas Gotten, 6725 Ridge Ave., Richard H. Overholt, 4024 Spruce St., Israel Davidsohn, 5610 Lebanon Ave., John P. Maus, 1806 Diamond St., William N. Parkinson, Temple University Hospital, Broad and Ontario Sts., Florence Polk, 2121 N. College Ave., David B. Gelfond, 115 N. 52d St., Philadelphia. *Reinstated Member*—Robert E. Huttenlock, 1122 E. Columbia Ave., Philadelphia. *Death*—Charles S. Potts (Univ. of Pa. '85), Feb. 16, aged 66; Hiram R. Loux (Jeff. Med. Coll. '82), recently, aged 71; William D. W. Hall (Univ. of Pa. '89), Feb. 2, aged 65; John F. X. Cannon (Univ. of Pa. '20), Feb. 13, aged 32.

Schuylkill: *Removal*—Lewis Taylor from Baltimore, Md., to Greenfield, Mass. *Death*—George O. O. Santec, Cressona (Jeff. Med. Coll. '97), Feb. 1, aged 55.

Washington: *Resignation*—Charles J. D. McVeigh, Rochester, Minn. (formerly of Dilliner, Greene Co.).

York: *New Members*—Eleanor T. Calverley, 210 S. Duke St., Richard M. Klussman, 144 S. George St., York.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since February 20. Figures in first column indicate county society numbers; second column, State Society numbers:

1930					
Feb.	20	Montour	28-31	3687-3690	$ 30.00
		Mercer	55	3691	7.50
		McKean	6-11, 13-20	3692-3705	105.00
		Northumberland	41-47	3706-3712	52.50
		Perry	8-10	3713-3715	22.50
		Luzerne	60-100	3716-3756	307.50
		Cumberland	21-22	3757-3758	15.00
		Indiana	39-40	3759-3760	15.00
		Huntingdon	18-21	3761-3764	30.00
	21	Clearfield	18-19	3765-3766	15.00
		Delaware	83-85	3767-3769	22.50
		Center	8-10	3770-3772	22.50
	28	McKean	21-28	3773-3780	60.00
		Center	11-13	3781-3783	22.50
		Lancaster	15-31	3784-3800	127.50
		Warren	15-46	3801-3832	240.00
		Lackawanna	132-155	3833-3856	180.00
		Mercer	56-58	3857-3859	22.50
		York	87-102	3860-3875	120.00
		Delaware	86-87	3876-3877	15.00
		Lycoming	72-83	3878-3889	90.00
		Wayne-Pike	1-15	3890-3904	112.50
		Crawford	7-16	3905-3914	75.00
		Dauphin	103-115	3915-3927	97.50
		Mifflin	19	3928	7.50
		Lehigh	21-48	3929-3956	210.00
		Armstrong	27-36	3957-3966	75.00
		Venango	31-32	3967-3968	15.00
		Northampton	77-102	3969-3994	195.00
		Franklin	45-48	3995-3998	30.00
Mar.	4	Blair	1-68	3999-4066	510.00
		McKean	29	4067	7.50
		Dauphin	116-133	4068-4085	135.00
		Indiana	41	4086	7.50
		Schuylkill	107-116	4087-4096	75.00
		Columbia	19-24	4097-4102	45.00
		Clarion	17-21	4103-4107	37.50
		Delaware	88-89	4108-4109	15.00
		Lancaster	32-86	4110-4164	412.50
		Lebanon	24-28	4165-4169	37.50
		Snyder	1-4	4170-4173	30.00
		Bedford	1-13	4174-4186	97.50
		Monroe	1-10	4187-4196	75.00
	6	Luzerne	101-157	4197-4253	427.50
		Huntingdon	22-26	4254-4258	37.50
		Lycoming	84-92	4259-4267	67.50
		Dauphin	134-143	4268-4277	75.00
		Erie	7, 40-82	4278-4321	330.00
		Westmoreland	45-84	4322-4361	300.00
		Adams	9	4362	7.50
		Bradford	15-29	4363-4377	112.50
		Monroe	11-14	4378-4381	30.00
		Franklin	49-50	4382-4383	15.00
		Carbon	25-26	4384-4385	15.00
		Lancaster	87-103	4386-4402	127.50
		Snyder	5-6	4403-4404	15.00
		Chester	34-48	4405-4419	112.50
		Philadelphia	1051-1223	4420-4592	1,297.50
	8	Delaware	90-93	4593-4596	30.00
		Monroe	15	4597	7.50
		Allegheny	670-878	4598-4806	1,567.50
	11	Philadelphia	1224-1372	4807-4955	1,117.50
		Bucks	29-34	4956-4961	45.00
		Lycoming	93-95	4962-4964	22.50
		Lackawanna	156-180	4965-4989	187.50
		McKean	30-31	4990-4991	15.00
		Somerset	27	4992	7.50
		York	103-110	4993-5000	60.00
		Adams	10-15	5001-5006	45.00
		Schuylkill	117-127	5007-5017	82.50
		Mercer	59-65	5018-5024	52.50
		Venango	33	5025	7.50
		Lancaster	104-119	5026-5041	120.00
	13	McKean	32-33	5042-5043	15.00
		Jefferson	1-23	5044-5066	172.50
		Bucks	35-42	5067-5074	60.00
		Lawrence	31-34	5075-5078	30.00
		Westmoreland	85-95	5079-5089	82.50
		Northumberland	48-53	5090-5095	45.00
		Berks	126-150	5096-5120	187.50
	14	Fayette	44-74	5121-5151	232.50

1930					
Mar.	14	Montgomery	142-155	5152-5165	$105.00
	15	Beaver	35-59	5166-5190	187.50
		Indiana	42-47	5191-5196	45.00
		Armstrong	37-42	5197-5202	45.00
		Dauphin	144-147	5203-5206	30.00
		Adams	16	5207	7.50
		Huntingdon	27-29	5208-5210	22.50
		Luzerne	158-202	5211-5255	337.50

COMMITTEE ON SCIENTIFIC WORK

C. Howard Marcy, M.D., *Chairman*
Pittsburgh, Pa.

THE PROGRAM OF THE MEDICAL SECTION

The program for the Section on Medicine at the Johnstown Convention has been practically completed with the exception of a few speakers.

From present indications, the men who attend this session can look forward to some very interesting and instructive papers and it will certainly be well worth the time involved, for any man in the State interested in medicine, to attend the next convention at Johnstown.

We have been particularly fortunate in securing as our guest speakers, Dr. Emanuel Libman, of New York, and Dr. Loring T. Swaim, of Boston. The subjects which will be discussed by these men have not been definitely decided upon, but their reputations assure us of two very interesting and brilliant papers.

A three-hour joint session has been arranged with the Section on Urology in which "Tuberculosis of the Genito-Urinary Tract" will be the subject for discussion, as we all know there are many differences of opinions between the urologist and the internist on the treatment of this condition. There has been a tendency of late to have joint sessions, and they have always brought forth interesting and instructive information when two such groups meet together.

The following symposiums have been arranged: Thyroid Disease; Diseases of the Gastro-Intestinal Tract; The Significance of Personality Make-up in Medicine; Cardiovascular Disease.

Several speakers of reputation and ability have already been secured for these interesting subjects.

The usual hour for case reports has been filled.

We hope, this year, that the period given over to discussion of papers will be taken advantage of by the members as very often interesting and instructive points have been brought out in these discussions.

COMMITTEE ON PUBLICITY

J. D. Keiper, M.D., *Chairman*
Johnstown, Pa.

TOURNAMENT OF THE PENNSYLVANIA STATE MEDICAL GOLF ASSOCIATION

Many humorous darts which have been directed toward our profession have been due to the rather prevalent indulgence in the ancient and honored game of golf. The number of doctors playing golf is increasing rapidly and the Golf Committee expects this increase to be reflected in the number of entries this year at the tournament sponsored by the Pennsylvania State Medical Golf Association. Last year, at Erie, there were about sixty entries and it is believed that the entries will be at least equaled this year. It is the custom of the visiting doctors to have some preliminary practice on the Sunday preceding the week of the Convention and the Golf Committee has made arrangements to have the course available for all those doctors who wish to play over the course on Sunday, a day prior to the tournament.

The Sunnehanna Country Club is situated in the Allegheny mountains at a very splendid location. There are few courses in the state of Pennsylvania which command a more beautiful view. The greens, which have been supervised by Emil Loefler, ground keeper of the Oakmont Country Club, are exceedingly good and have been pronounced the equal of those at Oakmont, where numerous national championships have been held.

The Committee claims that it will make the tournament a brilliant success this year, and although the tournaments have been increasingly better each year, it will try to out-do all preceding years.

Dr. Joseph P. Replogle, chairman of the local Golf Committee, will be glad to receive reservations.

County Society Reports

BERKS—MARCH

The monthly meeting was held Tuesday, March 11 at 3.45 p. m., at Medical Hall, with Dr. Robert M. Alexander, the president, in the chair. Dr. LeRoy M. A. Maeder, medical director of the Pennsylvania Mental Hygiene Committee of the Public Charities Association, addressed the Society on "Medicolegal Pitfalls." The Hon. Paul N. Schaeffer opened the discussion.

Dr. Maeder: A crime is a forbidden act with criminal intent, an offense against all society. The penalty for the crime is fixed by the state in all criminal proceedings, such proceedings being named, the Common-

wealth against John Doe. The act alone, with or without the intent, is considered a crime. Criminal intent per se does not commit a man; there is no crime unless a physical act is performed. A crime may be considered to be done maliciously, fraudulently, knowingly, negligently. Murder is the act of killing with the intent to kill. Larceny denotes the intent to deprive at time of theft. An abortion is the administration of drugs or the use of instruments on a woman who is or is believed to be pregnant, and resulting in death of the fetus. (According to the Pennsylvania law, one who intends to produce an abortion, whether the woman is pregnant or not, whether she aborts or not, and whether or not the fetus is dead, the intent to produce an abortion, constitutes guilt.—*Editor.)*

Responsibility does not mean moral or ethical responsibility it signifies that a person is legally liable to punishment for the crime. Murder, in legal language, is homicide.

A criminal trial is a formal examination by the state and the application of the law to the case. The state produces the witnesses. An ordinary witness testifies to facts observed through the special sense organs; an expert witness is one skilled in a trade, art, or profession, and qualified to give accurate opinion of facts deducted by himself, by others, or by hypothetical question. The plea of insanity avails only when it nullifies the criminal intent; the diagnosis rests not with the doctor, but with the jury. In typical cases, the expert's testimony is accepted; in borderline cases, the jury alone decides. As regards jury decisions an individual may be sane in some things but insane in others. Some pertinent questions: Did he have criminal intent? What was the mental state at the time of the crime? In applying the legal test, it must be determined whether or not a person is unable to distinguish between right and wrong, or the possibility of an insane delusion bearing on the subject, or the possibility of an irresistible impulse. Every man is judged sane until he is clearly found to be insane; there is a defect of the reasoning ability not to know the nature or the malice of the act. If the delusion is possible, as in personal defense against bodily violence, there is no penalty; if there is a delusion, i. e., that he was hit, when it is not true, there is a penalty attached. The judgment of an irresistible impulse or the test of responsibility ought to be adapted to the individual. Permanent moral or emotional insanity, or temporary passion do not free a person from the act. The question then arises; how far should mental imbalance be responsible for the act?

A doctor may be an ordinary or an expert witness depending on the circumstances. An expert's testimony is an interpretation of facts not known to the jury or the court. In a private case, the expert may state his fee. A court cannot eject any qualified expert witness of either allopathic or homeopathic school of medicine. As an expert witness a doctor must remember the seriousness and dignity of the situation, he must give careful attention, his statements must be unimpeachable, he must be jealous for the truth and unbiased, evidence must never be one-sided (that is the judicial position); an expert must also have poise and coolness, must not become partisan during the case, the judicial statement is final, and a medical expert must not disagree with the judge, or he may be held for contempt of court; he should not use medical or scientific phraseology to express his opinion, it would confuse the jury and the court.

Pearl E. Hackman, M.D., *Reporter.*

BLAIR—JANUARY-FEBRUARY

The regular monthly meeting was held January 28, at the Nurses' Home of the Altoona Hospital. Sixty members were present, and Dr. H. O. Jones presided.

The following officers were elected for 1930: H. C. Thomas, president; R. O. Gettemy, first vice-president; J. C. Noss, second vice-president; and Charles McBurney, secretary-treasurer.

Committee reports were made and approved; the most gratifying was the report of the secretary, which noted that the best average attendance at meetings in years was shown during 1929.

A rising vote of thanks was extended to the retiring president, Dr. Jones, for the excellent manner in which he guided the society during his tenure of office.

After the business session, Dr. S. Paul Taylor showed an enlightening series of motion pictures prepared by the Eastman Kodak Company entitled "Infections of the Hand." Dr. Taylor interspersed the pictures with short remarks on the subject.

The stated meeting for February 25, was held in the Nurses' Home of the Altoona Hospital. About forty members attended.

Dr. E. W. Stitzel read a paper entitled "Relation of Gastro-intestinal Disturbances to Mastoiditis in Infants." The discussion was led by Drs. Dight and Magee.

The relationship of the society to the woman's auxiliary and to the Blair County Tuberculosis Society was freely discussed from the floor, but no definite action agreed upon.

Edward F. Williams, M.D., *Reporter.*

CHESTER—MARCH

The meeting was held at the West Chester Golf Club on March 18. The attendance was very good and included members of the Montgomery County and Delaware County Societies.

After a short business session, Dr. Russell L. Cecil addressed the society on pneumonia. This was a thorough discussion of pneumonia from the standpoint of mortality statistics of cases in Bellevue Hospital, treated alternately with serum and without serum. He showed the importance of early and rapid accurate typing of various types of pneumonia. He, also, definitely showed by means of charts and statistics the great importance of the early administration particularly of type I serum and, to a lesser extent, of type II.

Dr. Cecil stated that there was some hope of developing a polyvalent serum for the heterogeneous pneumococcus types occurring in the infections of infants and young children.

I. P. P. Hollingsworth, M.D., *Reporter.*

DELAWARE—FEBRUARY

The meeting was addressed by Dr. Joseph V. Klauder, who chose as his subject four of the most common skin diseases: ringworms, drug eruptions, eczema, and syphilis.

In the modern treatment of ringworm of the scalp, Dr. Klauder mentioned the administration of thallium acetate. He claimed that this drug is contra-indicated in patients above the age of ten. Its action may be devastating upon the ovaries. The dosage is 8 mgs.

per kilogram of body weight. Its beneficial action is by producing an epilation. X-ray is of service, but the dosage should not be too large. Tinia xérion is easily cured with mild antiseptic dressings. Tinia circinata at times appears as a discoid plac similar in appearance to eczema; the former, however, is easily distinguished since there is no itching, nor inflammation, and since it is sharply marginated. Tinia circinata is easily cured with tincture of iodin, unless it occurs in the perineal, anal, or axillary regions, as in these areas, iodin is too irritating. A twelve per cent solution of sodium hyposulphite is efficatious. Ringworm of the hands and feet, not ringed, is very common. It is estimated that fifteen per cent to twenty per cent of all of us have ringworm of the toes. In the last ten years it has become more frequent, because of the coming together of large numbers of men incident to the war. It is characterized by a vesicular eruption and a white soggy epidermis, which may be moist or dry. It is noninflammatory unless it becomes secondarily infected. The patches are sharply marginated. At times it is difficult to distinguish it from eczema, but a microscopic examination of the scales dissolved in a solution of sodium hydroxide will disclose the parasites. The treatment that gives best results is a three-per-cent solution of salicylic acid in alcohol, which cures by causing an exfoliation of the skin.

Drug eruptions are characterized by a sudden onset, are red in color and of universal distribution. They may be urticarial or scarlatiniform. The drugs that commonly cause eruptions are copaiba, cubeb, coal tar preparations, allonal, luminal, arsenic, mercury, and bismuth. These eruptions may, or may not, itch. Their bizarre character furnishes a clue. Phenolphthalein causes a purplish rash, usually occurring in the same area. It may occur in any part of the body, in the mouth or on the tongue, on the scrotum or penis. Antipyrin sometimes causes a darkish lesion on the penis. The bromides cause an indurated nodular lesion on the face or legs, sometimes breaking down and becoming moist or fungating and causing a foul serum to form. The bromid rash is of long duration, but its involution is hastened by the administration of salt. The iodid rash may be petechial, vesicular, or acneform. The arsenic dermatitis presents variable eruptions, as the acute urticarial or papular eczematous, or the most common, the rubellar reaction.

These arsenic lesions are accompanied by severe itching. In the administration of arsphenamins an exfoliative dermatitis occurs according to the sensitivity of the patient to the drug. A complaint of itching is a danger signal when neo-arsphenamin is given. The rash can be prevented if the drug is not pushed in the face of an intolerable reaction. Also the interval between courses tends to prevent the eruption.

Fifty per cent of all eczemas are due to irritants of external origin. One must be more or less of a detective to discover the causative agent. One gets a clue by the location on the exposed parts, by the acuteness, by the linear streaks of vesicals, and if the rash disappears in vacation time, or if there is a change of habits. Cosmetics are particularly offending agents. Tooth pastes, skin foods, hair tonics, tomatoes, potatoes, cucumbers, turpentine, poison ivy, poison oak, primrose, silks, satins, and a host of other agents are within the realm of possible irritants. Novocain dermatitis occurs on the hands of dentists. A sensitivity may develop as well as be inherited. A most important test is the external irritant test in which the suspecting agent is placed in apposition with the skin by means of adhesive plaster and allowed to remain for several days, after which the irritant is removed and the skin inspected for evidences of irritation. This test is very accurate and helpful.

The various lesions of syphilis and their methods of diagnosis were detailed.

Lantern slides were shown.

WILLIAM H. GOODMAN, M.D., *Reporter.*

MONTGOMERY—MARCH

The regular monthly meeting was held March 5, at Montgomery Hospital, Norristown. It was a joint meeting with the Montgomery County Dental Society. Although the first of its kind ever held here, it was very successful. Sixty physicians and twenty dentists were present, besides the three speakers from the University of Pennsylvania. They were Dr. J. L. T. Appleton, Jr., professor of pathology and bacteriology, and Dr. Robert H. Ivy, professor of oral surgery of the Dental School; and Dr. Judson Daland, internist.

The subject of the symposium was: "Oral Infections and their Complications." Dr. Appleton said, in part: "Pulpitis is a sequel to dental caries, and may take place before there is clinical exposure of the pulp. After clinical exposure, the pulp is doomed. In periodontal inflammations, the bacteria gain access to the pulp via the lymphatics, and the streptococci can be recovered. Periapical infections are usually extensions from the pulp. The clinical varieties of streptococci are: Viridans (90%), hemolytic (4-8%), and indifferent, gamma, the remainder. Pyorrhea is primarily an atrophic condition of the gums receding from the teeth allowing access to bacteria in the crevices. In some cases diabetes and nephritis seem to contribute to the etiology of pyorrhea.

Dr. Daland said in part: Ninety per cent of all systemic infections have their origin in the head, and especially the mouth. The closed pyorrheal pocket is more dangerous than the open one. Periapical infection may produce no outward symptom, and may even be obscured in the x-ray examination by a deposit of lime salts. Infected granulation tissue the size of a split pea may be painless and yet the cause of many systemic infections, such as, heart and joints. Every devitalized tooth is a potential source of infection. Thirty-two per cent of edentulous jaws contain concealed pieces of roots. Ulcerative endocarditis means death, and may be produced by a tooth which the patient hates to lose. A patiently built up immunity may be sufficiently reduced in twenty-four hours to produce an arthritis, which may remain though the original focus be removed. There may be multiple foci, so that the removal of one focus will not relieve. The chronic streptococcal infections are generally characterized by a leukopenia and a relative lymphocytosis.

Dr. Ivy showed numerous lantern slides of dental cysts, salivary stones, and osteomyelitis of the jaw. He illustrated the surgical repair of deformities caused by disease.

The interest shown was such that it was believed desirable to have such a meeting annually to promote coöperation and understanding between the medical and dental professions.

W. W. DILL, M.D., *Reporter.*

PHILADELPHIA

February 26, 1930

The president, Dr. John A. McGlinn, in the chair.

Open Forum on Venereal Disease Control

President Judge Charles L. Brown, Municipal Court, Philadelphia.—This court was established in 1914 and has exclusive jurisdiction over streetwalkers, male and female. The women were at first merely fined and released, or put in the county prison or House of Correction; they were abused and misunderstood. When the venereal problem was presented to the Bar it was deemed that the public were not ready for the question. Under Dr. Samuel G. Dixon's incumbency as Commissioner of the State Department of Health the education of the public was undertaken and laws were passed. In 1915 an act was passed in Philadelphia giving the Municipal Court authority over those persons from sixteen to twenty-one years of age accused of disorderly streetwalking. An appropriation of $50,000 made by the Legislature to the Department of Health for the treatment of venereal diseases in women was vetoed by Governor Brumbaugh, a noted educator. In Philadelphia at first there was a preliminary examination by a woman physician then later the work was expanded to include diagnosis and recommendations for treatment of all medical and surgical conditions found in the defendants. It was useless to imprison them without treatment. No place, however, was equipped for the incarceration of veneral women. If treated under probation care, they could be cured. The problem is not one of contagion or contamination, but the influence on the coming generation and on the future of the patients. Sixty-three per cent of all women arrested are infected with syphilis or gonorrhea, either active or latent, hence an intensive plan of treatment was adopted. There was an increasing frequency of young, unsophisticated girls who used streetwalking as a means of increasing their income, and became infected with veneral diseases and many were successfully treated at the Gynecean Hospital, later abandoned.

The Director of Public Safety granted the Court, physicians to carry on the work. In 1921, Cardinal Dougherty set aside a place in the House of the Good Shepherd for treatment of these cases. The women's misdemeanors branch selects the cases, sending them to Holmesburg, the Philadelphia General Hospital, placing them on probation, or sending them to clinics. Medical contact has been of great benefit in the work of the Court. The infectious cases have fallen to twenty-five per cent since the department for the control of veneral disease was organized. In the Domestic Relations branch, of 15,199 examined, thirty-five per cent were found to have syphilis or gonorrhea. Among the children brought in, much infectious vaginitis has been found. The school is notified, the child excluded from school, treatment given and contacts are examined. Continued progress in the control of venereal disease will prove beneficial to the individual and to posterity. The increasing number of inferior children born of recent immigrants indicates a lack of sufficient examination of immigrants and threatens disintegration of our future race. Much health work was done in the past year at the ports both of embarkation and entrance, and nearly 27,000 were refused admittance through health factors. More funds are needed to increase the medical force. The work has reached many who would not otherwise have been treated. The steps that should be taken must be left to the medical profession. Facilities are now overcrowded and there is no place for the care of unfit children.

Arthur J. Casselmann, M.D., chief, Bureau of Venereal Disease Control, N. J.—Ten years ago state control of venereal disease was looked upon askance by religious bodies because they feared prophylactic stations and increased promiscuity. The program suggested by the United States was adopted by New Jersey: reporting the name and address of the patient and source; rendering the patients noninfectious; and educating the public as to the availability and efficacy of treatment and the methods of avoiding infection. The reputed source of infection is reported to the Health Officer and treatment is required. The state supplies modern drugs to the physician, neo-arsphenamin and bismuth being urged in the early stage. More careful smearing is stressed and drugs are supplied to clinics for the indigent. The treatment of gonorrhea in women can be effective if instigated early and thoroughly; in the male the disease is usually self-limited. Pamphlets on *The Right to Marry,* containing a plea for prenuptial examination, are given to every person applying for a marriage license. Booklets of information for nurses and one for patients are supplied, and speakers on sex hygiene and venereal disease are sent to schools and clubs. Attempts were made to force local officials to discourage houses of prostitution, especially in South Jersey, but the Bureau was forced to discontinue the effort. Venereal disease is rapidly becoming a disease of bums, for mechanical prophylaxis, the most effective preventive, is in high secret favor, and widely used. It is the alcoholic slip-ups that should be eliminated through education. Lawyers state the law was but a wartime measure. It is difficult to control irresponsible infectious persons. The state should make the transmission of venereal disease a penalized offense. The majority of prostitutes cannot be reformed. The New Jersey program for the control of venereal disease, then, is more valuable as a means of mechanical protection, education, prophylaxis, and making transmission criminal.

John C. Walton, M.D., president, Philadelphia Association of Retail Druggists.—The survey made recently of the Philadelphia hospitals puts the druggists in a bad light through error in interpretation of the statistics. After interviewing druggists from all parts of the city, the speaker found that there is a decrease in the calls for preparations for the treatment of venereal disease except in the tenderloin and lower colored class. The drug stores are not treating patients. There is an increased sale of prophylactic tubes. One druggist near a university in West Philadelphia reports a monthly sale of five gross of rubber protectors and three gross of prophylactic tubes. The motto of today, then, seems to be, "If you can't be good—be careful!"

P. S. Pelouze, M.D., of the Pennsylvania Social Hygiene Association.—The two human diseases, syphilis and gonorrhea, are both preventable. Syphilis is a name which can appear in the press without criticism and the individual is more apt to consult the physician, and facilities for treatment are good. There is a lack of knowledge of gonorrhea among the laity and lack of interest in it among the doctors. The male patients who can pay the fee for treatment are few and this disease among the poor receives the worst care of any human ill. Patients drift from place to place, they are ignorant, there is a lack of interest on the part of hospital boards and doctors and a lack of uniform treat-

ment. There are many cases, therefore the public should be better informed and facilities for good treatment by interested physicians established. Reports of globe-wide activity are being received and concerted action is needed in Philadelphia. Hence an organization has been formed and incorporated to educate the public in regard to the ravages of these diseases and their care. This is the Pennsylvania Social Hygiene Association, made up of social-minded citizens with nothing to gain, careful to avoid hardship or discredit to the profession. Its activities include public education to make and keep the laity doctor-minded, urging frequent contact with their physicians; the establishment of a centrally located, model dispensary coöperating with all hospitals, physicians, and social agencies, proof of inability to pay a doctor's fee being required of all patients, and with clinic physicians receiving compensation. It is hoped that then the hospitals will take steps to better their facilities. Invitations have been sent to the Philadelphia County Medical Society, the College of Physicians, and the Board of Health to appoint a representative to meet with the Board. A letter will be sent to all physicians asking for the names and addresses of those who are willing to receive patients referred from the clinic for treatment, that is, patients who can pay. The combination lay and medical board makes a more ready appeal to the public than would a board of either group alone. Of a group of men questioned in pool rooms, etc., on where to go for treatment, forty-two per cent referred the inquirer to drug stores, twenty-four per cent to doctors, sixteen per cent to clinics, four per cent offered home remedies, and fourteen per cent did not know.

MISS ALICE N. O'HALLERAN, chief of Bureau of Nursing.—At the House of the Good Shepherd is maintained a clinic and quarantine station. In 1929, more than five hundred girls were cared for. When asked why or how they became infected, they said they were drinking out, and did not know what had taken place. Many relapse, for they desire the dinners, dances, and shows. Many are unfitted for anything worth while and have had little educational or social opportunity. The age group recently has changed until in the last three years, instead of girls over twenty, the majority are about sixteen. As many as otherwise come from schools. Even when taught to earn a living it is hard to get the public to tolerate them and placement and social adjustment present great difficulties.

Dr. S. Leon Gans said that Judge Brown's dreams and visions of 1914 were realized in 1919 to 1923. Ministers have long been trying moral suasion on this problem. Public health work must have a receptive public. Health laws are enacted and different methods of enforcement must be employed among different peoples. As in a typhoid epidemic, the main foci should be sought out, quarantined and made noninfectious. The Pennsylvania State Police were used as health officers and county lines erased. Education and the provision of decent entertainment were stressed and coöperation of the medical and legal professions was sought. After positive information secured by the State Police that a house was a house of prostitution a health raid was made, the women taken were sent to the House of Correction, and the men were compelled to identify themselves, and were referred to the nearest clinic and compelled to visit the clinic until the period of incubation was over, or they were quarantined. Legal proceedings were left to the local departments and the local police were used if possible. Fifty-five clinics were established and about thirty detention homes, and though the case might be referred to the physician for treatment, discharge could be given only through the clinic. The inmates of all penal institutions were examined and treated and 3400 prostitutes were removed from the community. Luzerne County showed a drop, after this régime was begun, from forty to eleven new cases per month. Laws must be used and venereal advertising put out and above all, the Governor must coöperate.

Dr. Charles Mazer said that legislation has not reduced prostitution in other countries. The half-educated or educated girl is the greater menace for the high-school graduate cannot obtain a job as easily as can the factory girl nor is she paid a living wage. The non-professional prostitute is the greater menace.

Dr. George P. Pilling, Jr., said that if our premises are wrong our conclusions will be wrong. People taboo the subject. The one-room apartment is flourishing. Sixty-nine per cent of the patients contract venereal disease clandestinely. We should make the subject public. No church, no book, no lecture, no home, or mother will ever make intercourse unpopular—therefore, teach prophylaxis. There is today more giving away to sex than ever before and this is due to prohibition. He urged that the young man be taught prevention and the seriousness of venereal disease.

Dr. B. A. Thomas believes the Pennsylvania Hygiene Association is excellent for education of the public, but that a central clinic for venereal disease is wrong. Existing clinics should be qualified. He is in favor of control by the State.

Dr. Thomas C. Stellwagen referred to licensed prostitution in Europe. Education must be largely by example, and in the home. The younger members of the family should not be encouraged in salacious literature and movies, and automobile rides. Better working conditions should be urged. The imputation that existing clinics are at fault is unwarranted, for the city is well equipped. The problem can be controlled through agencies which we have at hand.

Dr. John A. McGlinn said that this is a most difficult question, and that prohibition cannot be divorced from it. At St. Vincent's Hospital, Philadelphia, of five hundred illegitimately pregnant girls admitted, ninety per cent ascribed their folly to the hip-pocket flask. Education is a great factor. The Philadelphia County Medical Society should be the basis of organization in public health matters.

A letter from the Philadelphia Association of Retail Druggists stated that in nearly all instances the druggist refers the inquiring patient to the proper doctor for treatment.

MARY A. HIPPLE, M.D., *Reporter.*

WARREN—MARCH

The March meeting was held at the Conewango Club with an attendance of twenty-five.

There is an epidemic of German measles in the borough, and the members of the Society feel that it is unnecessary to have a sixteen-day quarantine for a disease which never produces any complications or deaths, and they have passed a resolution requesting the State Board of Health to reduce the period of quarantine in keeping with the mildness of this disorder.

The subject for the meeting, "Medical Ethics," was introduced by Dr. M. T. Smith, who called for a discussion. The chief complaint seemed to be the stealing of patients, and this in many instances was not due to the fault of the physician as much as the desire of the

patient to evade a bill, or ignorance on his part of what was proper in the dealing of a patient with his physician. Dr. Smith advised a more general acquaintance with the code, and in the discussion Dr. Robertson and Dr. Ball tried to show that physicians were more honorable in their dealings with each other than any other class of people. An article on the morals of the physician that was written thirty-three years ago was read, and it seemed that there was little change for the worse in these days of high commercialism.

Drs. Hyer, Hamilton, Kelley, and Kibler were hosts.

M. V. Ball, M.D., *Reporter.*

The Woman's Auxiliary to the Medical Society of the State of Pennsylvania

Mrs. Wilder J. Walker, *Editor*
546 South Street, Greensburg, Pa.

THE MONTHLY MESSAGE OF THE PRESIDENT

Dear Auxiliary Members:

Doubtless most of you know already of the sad bereavement that has come to one of the most faithful and most valued members of our State Board, our recording secretary, Mrs. James I. Johnston. It is a shock to us all, and I greatly regret that the news did not reach me until too late to refer to it in my March letter. The Board has voted a resolution of sympathy to be spread upon the minutes and sent to Mrs. Johnston, and I have appointed Mrs. John F. McCullough, Allegheny County, Mrs. J. Newton Hunsberger, Montgomery County, and Mrs. Charles H. Smith, Fayette County, to draft an appropriate expression of our appreciation of Dr. Johnston's high character and our sympathy with his family in their loss.

Mrs. Johnston has presented her resignation as recording secretary, which has been accepted with deep regret. We can only hope that she will not lose interest in the Auxiliary, and that at some future date she may feel able to resume her active participation in its affairs.

By the time you read these lines Mrs. Page's campaign for periodic health examination will be in full swing. Pity that poor ostrich, don't ape his reputed folly.

The promised treasurers' receipt blanks may be a little delayed, owing to the serious illness of our national president, Mrs. Hoxie, who is now, I am glad to say, on the mend. Every county will receive them in due time and their use is to begin on April 1. Full instructions will accompany them, which should be strictly followed. Questions answered!

The national chairman of Public Relations, Mrs. M. P. Overholser, St. Joseph, Missouri, writes that in reply to her inquiries, thirty-seven out of forty-eight state health departments report assistance in their public health work by women's organizations, and that five states—Indiana, Kentucky, Missouri, Pennsylvania, and Texas—mention particularly the work of the state medical auxiliary. Isn't it gratifying to know that our efforts to coöperate with our own Health Department are appreciated, and that we have earned this flattering recognition by Dr. Appel?

I am receiving most encouraging reports of work in progress all over the State, partly carrying on former activities, partly undertaken as a direct result of my presentation of Dr. Appel's county programs and of the National Study Envelopes.

Don't forget that May is Health Month, the first day devoted particularly to children. Many auxiliaries have already planned special features to promote health work, ranging all the way from brief notices in the daily papers to an all-day health institute with health movies and addresses by experts. This is the time, too, to prepare for that Summer Round-Up of preschool children, so successful where it has been actively pushed. It all helps to keep the subject of health before the public, and its promotion in the hands of reputable physicians instead of ignorant quacks.

In closing let me direct your attention to the "Reasons for the Woman's Auxiliary," printed below. The Iowa State Medical Society—mark you, the State Medical Society, not the Woman's Auxiliary—has gotten out this admirable little leaflet. Would that it might reach the eye and the inner consciousness of every one of the 91,000 members of the A. M. A.

Faithfully yours,
Corinne Keen Freeman, *President.*

REASONS FOR THE WOMAN'S AUXILIARY

Joining and taking an active part in the Woman's Auxiliary could very well be ranked as the first activity which any physician's wife should assume outside her home. The immediate welfare of physicians and their families and the future of medical practice depend upon what the public thinks and does with regard to medical practice and health activities. Organized medicine exists largely for the scientific advancement of its members, the betterment of the profession, and proper guidance of health activities. Except for scientific education, practically every purpose of organized medicine can be as well, or better, accomplished by a woman's auxiliary than by a medical society itself. Some of these activities are:

Promote Friendliness

In many localities where the Woman's Auxiliary has undertaken little but social activities, great results have

been accomplished. Social gatherings have resulted in better acquaintance and greater friendship among physicians and their families and increased the solidarity of the profession. Where the wives have held a meeting at the same time the medical society held a scientific session, the attendance at the medical meetings has been surprisingly increased.

Guide Health Activities

It is generally true that physicians' wives are, or can easily become, active in the public health programs of the various lay organizations whose work is everywhere impinging upon medical practice. These lay health organizations accomplish great good both for the public and the profession, and auxiliary members can very easily see to it that the various lay activities with which they are connected are conducted in a way that meets with the approval of the physicians in their county. In this way a possible liability can easily be turned into a tremendous asset.

Health Education

One of the favorite forms by which quackery propagates itself is through lectures offered to women's clubs and other lay organizations. The Iowa State Medical Society has a speakers' bureau which can send qualified physician speakers to any or all lay meetings. The members of the Woman's Auxiliary could very easily eliminate faddists as club speakers and also find dates for members of the state society speakers' bureau. Lay education of this sort will destroy the cults faster than any laws.

Other Activities

The auxiliaries in Iowa and over the country have entered into a variety of other activities. These depend upon the needs of the local community, as well as what the collective membership may be disposed to do. Some of these community services are: Aiding hospital, sewing and so forth for indigent sick, promoting county health unit, directing or promoting special health activities. In two or three societies the auxiliary is making a great contribution to the annual session by acting as hostesses at the banquet.

Opportunity

Please notice that the first three activities outlined above are not in themselves burdensome. They will not make great demands upon the time of the individual members. Since the physician's wife is generally, by virtue of her position in the community, already active in social and health organization, it follows that the program outlined above will not mean an increase in duties and responsibilities but merely the coördination of those community enterprises, the proper conduct of which is so vital to her husband's success, to the future of the profession, and to the welfare of the community.

For further information refer to *Secretary*, Woman's Auxiliary, 1122 Bankers Trust Bldg., Des Moines, Iowa.

AUXILIARIES ATTENTION!

It is hoped that every auxiliary in the State will endeavor to hold at least one Health Meeting during the year, in affiliation with women's clubs or groups of women, and that immediately following the meeting a report will be sent to the State chairman of the Committee on Public Relations, Mrs. Edward Lyon, 900 High Street, Williamsport, Pennsylvania.

COUNTY AUXILIARY REPORTS

Beaver.—The bimonthly meeting, held in the Community House, Council of Jewish Women, Beaver Falls, was preceded by a luncheon with thirty-two members present. The new president, Mrs. L. L. Hunter, was in charge. The reports of the executive board and the treasurer were given. The following chairmen were appointed: hospitality, Mrs. G. L. McCormick; program, Miss Juliette Wilson; finance, Mrs. W. C. Meanor; membership, Mrs. J. C. McCauley; *Hygeia*, Mrs. A. B. Cloak; legislative, Mrs. Ira C. Duncan; health, Mrs. W. L. Coss; publicity, Mrs. F. H. McCaskey. Two new members were present. After the meeting, eight tables of bridge were formed.

Cambria.—It is interesting to receive a report from Fruitland Park, Florida. Mrs. Harris, while on a vacation, wrote her report as follows: The auxiliary met, February 12. Mrs. Palmer gave an elaborate report of Mrs. Freeman's recent visit. Many new plans were made for the coming convention in October. Mrs. Freeman's visit was an inspiration to each auxiliary member who heard her.

Clinton.—An interesting talk on community health problems and the women's responsibility in connection with them was given by Mrs. Freeman, our State president, at a luncheon on February 15 at the Hotel Fallon by our local president, Mrs. David W. Thomas. The guest list of eighteen included Mrs. W. S. Brenholtz and Mrs. Edward Lyon of Williamsport and Mrs. Warren N. Shuman of Jersey Shore.

It was decided that the local auxiliary should foster a local observance of the May Day child-health program. Mrs. Thomas has been placed in charge of the county observance by Dr. Mary Riggs Noble, chief of the preschool division of the Department of Health.

Dauphin.—The February meeting was instructive, interesting, and enjoyable. In accordance with the request of Mrs. Freeman that one meeting of the year be devoted to the subject of mental hygiene, our program committee secured Dr. W. L. Sandy, director of mental hygiene of the State Committee, to present the subject to us. Tea and a social hour followed.

We have an enthusiastic and active welfare committee. Their special work is for the Preventorium Camp at Highspire. This camp is conducted during the summer for under-privileged children, but our work for the camp has begun now and will continue during the year.

Erie.—The auxiliary met at the home of Mrs. Maxwell Lick, March 3. Dr. R. O. Miller, county medical director, outlined the immunization against diphtheria of preschool and school children in the county. Bridge and tea followed.

Fayette.—By way of not appearing too serious-minded to our sister auxiliaries, we report an interesting social and business meeting of February 6. We had the pleasure of having with us at that time Mrs. Walter J. Freeman, our State president, in whose honor a dinner was arranged by the hospitality committee and given at the White Swan Hotel.

A distinguished guest, Dr. G. W. Neff of Masontown, the oldest member of the Fayette County Medical

Society, gave an interesting talk on the history of medicine. Dr. Neff spoke from a wealth of experience and we shall always be grateful for the pleasure of his presence.

Through the forceful personality of Mrs. Freeman, Dr. Appel's health program was ably presented, and will be a goal to strive for, in our crusade for better health.

Franklin.—At a joint meeting with the Medical Society, Greencastle, February 18, a banquet was served by the Ladies Aid Society of the Trinity Lutheran Church. Following the banquet, Mrs. L. M. Kauffman, our president, called a business meeting. The secretary gave a short outline of the past year's work. Mrs. Freeman, our guest and principal speaker of the evening, spoke on the aim and object of the auxiliary.

Miss Elizabeth Heckman of Carlisle was soloist of the evening.

Greene.—The auxiliary gave a luncheon in the Fort Jackson Hotel, February 5. The president, Mrs. R. E. Brock, and twenty members and guests were present. Valentine favors were used with decorations of spring flowers and red candles. The women stood as a short prayer was offered by Mrs. Mary S. Parry. Greetings from the County Medical Society were given by Dr. S. T. Williams and Dr. R. E. Brock and acknowledged by the auxiliary.

Mrs. Walter J. Freeman was honor guest and gave an interesting talk. A musical program followed. Mrs. J. H. Hazlett (Fayette County), Mrs. Herbert Shannon (Washington County), and Mrs. C. P. Reed (Nemacolin) were guests.

An open meeting followed with an exchange of questions and answers pertaining to the work of the auxiliary with Mrs. Freeman giving the accepted decision on important matters.

Lackawanna.—The regular meeting of the auxiliary was held in the Chamber of Commerce Building, February 11. The following were elected to office for the ensuing year: first vice-president, Mrs. Edgar Sturge; treasurer, Mrs. C. R. Park; corresponding secretary, Miss Sadie Falkowsky. Chairmen: entertainment, Mrs. L. M. Elsinger; publicity, Mrs. F. M. Ginley; health, Mrs. S. J. Morris; membership, Mrs. Myles Gibbons; public health, Mrs. Harry Goodfriend; education, Mrs. M. I. Pentecost; *Hygeia,* Mrs. F. M. Ginley.

Lehigh.—The February meeting of the auxiliary was in the form of a valentine social, held at the Hotel Traylor, Allentown. This was the first meeting at which the new president, Mrs. Charles R. Fox, officiated. A social hour with refreshments followed a short business meeting. The remaining time was spent at cards.

Lycoming.—A valentine luncheon and meeting of the auxiliary was held in the Woman's Club, February 14, with Mrs. Walter J. Freeman as guest of honor. Other guests were Mrs. David Thomas of Clinton County, and Mrs. J. H. Page of Potter County. Reports of various committees were read and approved.

Mrs. Freeman spoke briefly regarding the State Convention to be held in October. She urged the women to attend, pointing out some of the interesting features being arranged for the women. She also gave a promotive program. At the conclusion of the meeting, the members adjourned to the auditorium, and Mrs. Freeman addressed the club women of Williamsport and vicinity.

Mifflin.—The auxiliary held its annual election at the January meeting, with the following results: president, Mrs. J. G. Koshland, Lewistown; vice-presidents, Mrs. H. E. Miller, Belleville, and Mrs. O. M. Weaver, Lewistown; recording secretary, Mrs. J. S. Brown, Lewistown; corresponding secretary, Mrs. R. T. Barnett, Lewistown; treasurer, Mrs. Charles J. Stambaugh, Reedsville.

We have about four meetings a year, usually consisting of a short program followed by a social hour of bridge. At the February meeting we invited the wives of the physicians of Juniata County and hope that they may join our auxiliary as they have none in their own county.

Montgomery.—The auxiliary held its annual meeting on February 26 at the Valley Forge Hotel, Norristown. The meeting was in the form of a luncheon followed by bridge.

We were very fortunate in having as our principal speaker, Mrs. Hunter, president of the New Jersey State auxiliary. Mrs. Hunter made helpful suggestions for our own auxiliary. She mentioned a circulating library which proved of great benefit to their own members. A special point was insisting that as many members as possible should participate in their activities.

During the luncheon, our president, Mrs. Warren Anders, on behalf of the auxiliary members, presented a beautiful silver vase to Mrs. J. Newton Hunsberger, president-elect of the national auxiliary.

Northampton.—Members of the auxiliary joined with the D. A. R. at a card party held in the Woman's Club in Bethlehem on February 12. A brief business session was held by the auxiliary, and the president, Mrs. W. G. Tillman, appointed her committees for the year. The chairmen are: health education, Mrs. W. D. Chase; ways and means, Mrs. Elmer J. Dech; publicity, Mrs. H. F. Leibert; flowers, Mrs. G. A. Petrulias.

Philadelphia.—The stated meeting of the auxiliary was held, February 18, in the auditorium of the Society Building. Mrs. Wilmer Krusen presided. Plans for the all-day health institute to be held on May 8 are progressing nicely. The auxiliary has been invited to take part in the broadcasting of the County Medical "Health Talks" every Tuesday evening from 9.20 to 9.30 over station WFAN, and on March 11, Mrs. Krusen talked, and on March 18, Mrs. Freeman was heard.

Dr. John A. McGlinn, president of the county medical society, gave an interesting talk on the "Duties of the County Medical Society to the Community."

Contralto solos were sung by Cordelia Siegfried Kraft, with Emily Loeben Kalmbach at the piano. Mrs. Edward J. Klopp presided at the tea table. Hostesses for the day were Mrs. Wilmer Krusen, Mrs. W. B. Odenatt, Mrs. O. H. Petty, and Mrs. G. P. Müller.

Tioga.—The auxiliary met at the Penn Wells Hotel in Wellsboro on February 13. Mrs. Walter J. Freeman was honor guest, and Mrs. Jennie Hurd and Mrs. Carl Kyjleyard of Potter County shared honors. Mrs. Freeman's talk was interesting and instructive. She gave Dr. Appel's plan for health work in Tioga County. This work is well cared for in the towns but not in the outlying districts. A summer round-up was suggested and approved. The discussion brought out anew the great need for an additional county worker and it is hoped that one may be secured. Meetings will be held bimonthly.

Washington.—The February meeting of the auxiliary was held in the Nurses' Home of the Washington Hospital. Following a short business meeting, Mrs.

Helen Patterson Cummings, accompanied by Miss Margaret Acheson, gave a delightful group of Scotch songs.

The historical program for the afternoon had been carefully prepared and was appreciatively received by the audience. Mrs. W. D. Teagarden discussed the physicians of Washington County. She interspersed her remarks with many delightful and varied reminiscences. Mrs. C. C. Cracraft discussed the physicians in the Claysville region, West Alexander, and Taylortown. She said that the first physician in Washington County was Dr. Henry Morre, who began practice in 1777. There have been between fifty and sixty physicians in this region since that time. Mrs. Cracraft possessed much personal knowledge of her subject, because of her husband's long and intimate association with the Washington County Medical Society, so her remarks were of special historical value. Mrs. J. A. Douglass, of McDonald, told of the physicians of Canonsburg, McDonald, Robinson township, and Midway, relating many interesting facts concerning them. Mrs. D. L. McCarrell related the history of the region around Hickory. Mrs. McCarrell had with her for inspection, an interesting collection of curios pertaining to the pioneer physician's life. Among them were saddle bags, riding boots, instruments for bleeding a patient and forceps for extraction of teeth, all these had been used by medical men in the McCarrell family. Mrs. J. H. Cary discussed the southern portion of Washington County; she also had a collection of diaries, ledgers, and other articles which vividly portrayed the strenuous life of the practitioner. Mrs. A. N. Booth, Bentleyville, ably enumerated events in the medical history of the eastern part of the county, giving many personal glimpses into the lives of the physicians and their families.

The last number proved a fitting conclusion to a varied and delightful program, as Mrs. J. H. Corwin gave a history of medicine, an enlightening summary of the development and progress of medicine throughout the centuries.

A social hour followed with refreshments.

Westmoreland.—The auxiliary held its monthly meeting at the Elks' Club at Greensburg, March 4. The business meeting was preceded by a luncheon with twelve members present. A motion was passed that one hundred dollars of the money in the treasury be put in a savings account in a Greensburg bank.

We are glad to welcome as new members, Mrs. Robert C. Johnston, of Springdale, and Mrs. W. J. Latimore, of Herminie.

After the business meeting cards were played.

Medical News

Births

To Dr. and Mrs. Lemuel Lasher, of Erie, a daughter, recently.

To Dr. and Mrs. H. P. Shellabear, of Reading, a daughter, March 1.

To Dr. and Mrs. B. W. Grabiak, of Johnstown, twin boys, February 10.

To Dr. and Mrs. Gabriel Tucker, of Cynwyd, a son, John Anwyl Tucker, February 20.

Engagement

Miss Katharine Adele McFarland, daughter of Dr. and Mrs. Joseph McFarland, of Philadelphia, and Dr. Roy V. Gerken, of New York.

Marriages

Miss Nora Bloom to Dr. Leo W. Hornick, of Johnstown, February 5.

Miss Nancy duPuy Knowles to Dr. V. W. Murray Wright, both of Philadelphia, March 7.

Miss Marguerite Alexander, of Westmont, to Dr. John O. Prosser, of Hollidaysburg, January 29.

Miss Cora Mackie, of Philadelphia, to Dr. Archibald McLean Cook, of Williamsport, February 19.

Miss Katharine E. Whelen, of Charlottesville, Va., to Dr. H. Miron Tracy, of Philadelphia, April 5.

Miss Margaret Litchfield, daughter of Mrs. and the late Dr. Lawrence Litchfield, formerly of Pittsburgh, to Mr. Thomas C. Denton, of Philadelphia, February 25.

Deaths

Mrs. Wirts, wife of Dr. Charles W. Wirts, of Pittsburgh; March 4.

William S. Engle, M.D., of Buckingham, Bucks County; aged 77; February 17.

Mrs. Mary A. H. Shearer, wife of Dr. H. Maris Shearer, of Philadelphia; February 19.

Miss Mildred G. Murray, daughter of Dr. and Mrs. V. A. Murray, of Patton; February 2.

Mrs. Anna Tomlinson Baker, wife of Dr. W. F. Baker, of Philadelphia; February 24.

Rufus E. LeFevre, M.D., of Reading; Jefferson Medical College, 1900; aged 54; March 2.

Mrs. Mary Lowber Thomson, of Ardmore, widow of Dr. Archibald G. Thomson; February 8.

Walter H. Herriott, M.D., of Freedom; Jefferson Medical College, 1908; aged 53; January 2.

Joseph C. Guernsey, M.D., of Bryn Mawr; Hahnemann Medical College, 1872; aged 81; February 23.

George C. Brown, M.D., of Dunmore; University of Pennsylvania School of Medicine, 1880; aged 71; January 26.

James I. Johnston, M.D., of Pittsburgh; University of Pennsylvania School of Medicine, 1893; aged 62; February 9.

Edmund W. Samuel, M.D., of Mt. Carmel; Jefferson Medical College, 1880; aged 73; the early part of March.

Joseph F. Hilly, M.D., of Philadelphia; Jefferson Medical College, 1910; aged 42; January 8, of heart disease.

Harold G. Palmer, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1895; aged 57; March 15.

Edward E. Moore, M.D., of New Bloomfield; Jefferson Medical College, 1887; aged 64; March 4, from a complication of disease.

Loyal G. Lutz, M.D., of Roscoe; University of Pittsburgh School of Medicine, 1904; aged 50; January 19, of heart disease.

Mary A. Eckstein, M.D., of Philadelphia, widow of Dr. Henry C. Eckstein; Woman's Medical College, 1890; aged 80; February 16.

William L. Quinn, M.D., of Fayette City; College of Physicians and Surgeons, Baltimore, 1896; aged 58; February 7, of heart disease.

Emory Graham Alexander, Jr., of Philadelphia, son of Dr. and Mrs. E. G. Alexander, and grandson of Dr. and Mrs. John B. Deaver; aged 3; February 25, of pneumonia.

William W. Speakman, M.D., formerly of Swarthmore, Pa., professor emeritus of ophthalmology, Hahne-

mann Medical College, died at Atlantic City, February 28, aged 65. Dr. Speakman was graduated from Hahnemann Medical College in 1887. From 1897 to 1900 he was instructor of otology at Hahnemann, instructor in ophthalmology from 1904 to 1910, and professor of ophthalmology from 1910 to 1925.

Harry J. Donaldson, M.D., of Williamsport; University of Pennsylvania School of Medicine, 1895; aged 56; February 5. Dr. Donaldson took postgraduate work in surgery in Baltimore, New York City, and the Mayo Clinic, and was one of the pioneers of surgery in his community. He conducted his own private hospital for a number of years. Since 1911 he was on the surgical staff of the Williamsport Hospital. He was a past president of the Lycoming County Medical Society, and is credited with the development of the best natural game-conservation program devised by any state in the Union.

Hiram R. Loux, M.D., of Philadelphia; Jefferson Medical College, 1882, receiving the Lee prize for original research; aged 70; February 27. After his graduation, located in Souderton, Montgomery County, and seven years later moved to Philadelphia. He was on the surgical staff of the Philadelphia General Hospital from 1900 to 1927. In 1894 the Board of Trustees of Jefferson Medical College created a new department of genito-urinary diseases, and Dr. Loux was made chief clinical assistant to Dr. Orville Horwitz, who was made clinical professor. With the death of the latter in 1913, Dr. Loux was made professor of urology. Dr. Loux was born in Bucks County. His father came from a Huguenot family famous for military and political activity in southern France for 500 years. His mother was a descendant of David Rittenhouse, an astronomer in the early days of the American Republic, who was noted for his many scientific achievements. An oil portrait of Dr. Loux was presented to Jefferson Medical College, 1929, by the senior class.

Miscellaneous

Dr. Solon L. Rhode, of Reading, has returned from Miami, Long Key, and Havana.

Dr. and Mrs. Francis J. Kelly, of Merion, have returned from a Mediterranean cruise.

Dr. and Mrs. George E. Levis, of Philadelphia, have recently enjoyed a West Indian cruise.

Dr. J. R. Rankin, of Muncy, was a recent patient at the Geisinger Memorial Hospital, Danville.

Dr. J. F. Fleming, of Trout Run, who has been seriously ill with pneumonia, is steadily improving.

A drive for $1,500,000 was conducted for the Pennsylvania Hospital, Philadelphia, March 7 to 17.

Dr. L. H. Mayer, Jr., of Johnstown, has been issued a limited commercial pilot's license. Mrs. Mayer is also a licensed pilot.

The Delaware County Hospital is making a drive to raise $65,000, in order to receive a gift of $100,000 from an anonymous benefactor.

St. Joseph's Home for Incurables, Philadelphia, will receive the $8450 estate of James J. Langon, who died January 16.

Dr. Eugene Delaney, of Williamsport, has resumed the practice of medicine and surgery after completing a postgraduate course in Vienna.

The Malvern branch of the Rush Hospital for Consumption and Allied Diseases has started a campaign to raise $4000 for improvements to the building.

The Methodist Episcopal Hospital, of Philadelphia, will receive $1000 from the estate of F. R. Schafer, retired commission merchant, who died recently.

A trust fund of $1000 is created for the Jewish and Mt. Sinai Hospitals, Philadelphia, by the will of Mrs. Dora Sclarenco, who died in Atlantic City, February 21.

Dr. Temple Fay, professor of neurosurgery, Temple University School of Medicine, addressed the Atlantic County Medical Society, Atlantic City, N. J., March 14, on "Head Injuries."

Dr. Earl D. Bond, president of the American Psychiatric Association, will assume the professorship of psychiatry in the University of Pennsylvania School of Medicine, July 1.

Dr. George C. Yeager was elected a member of the Board of Directors of the Philadelphia County Medical Society, February 24, to fill the vacancy caused by the resignation of Dr. Peter P. Klopp, on account of ill health.

Dr. L. A. Lasher, of Erie, and his associates announce the opening of a goiter clinic, to be held every Thursday, from 3.30 to 5 p.m., for the diagnosis and treatment of thyroid diseases.

Dr. M. T. Leary, of Meadville, spent the month of February at Tulane University, New Orleans, La., to take a special course in diseases of the eye, ear, nose, and throat. Mrs. Leary and their daughter accompanied him.

A notice recently appeared in an Omaha, Nebraska, paper that a set of triplets sixty-two years of age, one male and two females, believe they are the oldest living triplets. No doubt their parents thought they would not be able to raise them.

Dr. W. Clair Bastian, of Williamsport, who has been ill for some time, has reopened his offices and is specializing in surgery. He has recently completed a one-year postgraduate course in surgery at the New York Polyclinic Hospital.

The Pennsylvania Hospital will receive $10,000 for the endowment of a bed under the will of Mrs. Emma Hammond, of Philadelphia, who died February 19. From a trust fund created by her husband, Mrs. Hammond left $5000 to the Wills Eye Hospital.

Dr. Howard Forde Hansell, noted ophthalmologist of Philadelphia, was injured on the back and right knee when an automobile struck him as he was out walking with Mrs. Hansell, who was only slightly bruised. Dr. Hansell, who is 74, retired from the faculty of Jefferson Medical College in 1925.

At the March 31 meeting of the Physicians' Square Club of Philadelphia, held at the Hotel Sylvania, Mr. Charles W. Palmer, school councilor of the North East High School, and Mr. Robert P. Wibnall, associate plant employment supervisor of the Bell Telephone Company, were the guest speakers.

Dr. Leon F. Luburg, veteran police surgeon, was made an honorary deputy fire chief February 18, upon the occasion of his having completed twenty-five years' service with the Department of Public Safety, when a gold deputy fire-chief's badge, the gift of general officers of the Fire Bureau, was presented to him.

The following program of radio talks was sponsored by the Pennsylvania Mental Hygiene Committee of the Public Charities Association during the month of March over WIP, Philadelphia: "The Art of Living," Dr. Everett S. Barr; "Your Job," Dr. James J. Waygood; "Habit Training of Children," Dr. Ethel C. Russell; and "Child Guidance," Dr. Frederick H. Allen.

At the March meeting of the Obstetrical Society of Philadelphia, Dr. Louis S. McGoogan, Fall River, Mass. (by invitation), presented a paper on "Disproportion and Contracted Pelvis," an analysis of 471 cases at the Royal Victoria Montreal Maternity Hospital. The discussion was opened by Dr. J. W. Duncan, Montreal, Canada (by invitation).

DR. CHARLES S. POTTS, noted neurologist who died February 16, directed in his will that a phonograph and fifty records suitable for nervous patients be placed in the men's nervous ward of the Philadelphia General Hospital. A number of medical volumes are left to the libraries of the University of Pennsylvania and the College of Physicians.

ON MAY 21, AT THE ANNUAL MEDAL DAY EXERCISES, the Franklin Institute will present the highest honor Philadelphia can bestow on a physicist or an engineer —a Franklin Medal, when Sir William Henry Bragg of London, director of the Royal Institution of Great Britain, and John F. Stevens, who planned and organized the engineering force which built the Panama Canal, will receive this distinguished award.

PLANS WERE APPROVED MARCH 5 BY THE BOARD OF TRUSTEES for the Cumberland Valley, Pennsylvania, institution for male detective delinquents. The institution is to be located near White Hill, in Cumberland County. The institution is planned eventually to accommodate 2000 inmates, and will cost approximately $6,000,000 to complete. The last Legislature appropriated sufficient funds to pay the architect and provide the sewage system.

PENNSYLVANIA MOTOR VEHICLE TAGS ARE "GOOD" IN THE BELGIAN CONGO, Motor Vehicle Commissioner Benjamin G. Eynon learned when he received a photograph from that far-away part of Africa. The snapshot showed an automobile bearing Pennsylvania tags 15-141 standing before a mud and bamboo garage having a thatched roof. Records show the tags were issued to Dr. C. K. Becker, of Boyerstown. Dr. Becker went to the Congo last August.

SIX FIREMEN WERE GASSED AND BURNED, February 27, in an x-ray room fire and film explosion on the top floor of the Pritchard Memorial wing of Aston Park Hospital, Asheville, N. C. Quick action on the part of nurses and hospital officials in removing the eighteen patients in the wing saved inmates of the hospital from possible injury. This should serve as a further warning to hospitals, to perfect their responsibilities in their x-ray department.

DR. JOSEPH B. WOLFFE, lecturer on cardiovascular diseases in the Temple University School of Medicine, Philadelphia, addressed a meeting at the Davis Memorial Hospital, Elkins, West Virginia, March 14, on "The Heart in General Medicine." A heart clinic was conducted during the afternoon. The assembly was a dedication of the electrocardiographic department at the hospital, installed in memory of its founder, Dr. William W. Golden.

DR. SAMUEL F. HASSLER, who has served on the staff of the Harrisburg Hospital for thirty-six years, recently resigned, and the vacancy is being filled by Dr. C. P. Faller. Dr. Hassler felt that he had too many other duties to perform, but he will continue to be consultant in the Medical Department. Dr. J. M. J. Raunick resigned from the medical dispensary staff, and was elected to the newly established position of chief of communicable diseases.

THE AMERICAN MOUTH HEALTH ASSOCIATION is the name of a recently organized body of physicians for the promotion among the lay public of a better understanding of healthful living, particularly with reference to mouth hygiene. The headquarters of the association are in the Essex Building, Minneapolis. Dr. Thomas B. Hartzell, professor of mouth infections at the University of Minnesota Medical School, is president of the Board of Trustees.

ACCORDING TO A LETTER FROM DR. ROUX, Pasteur Institute, to *The Spectator,* since the invention of the preventive treatment of hydrophobia after bites—practiced at the Paris Pasteur Institute from 1888 to December 31, 1928—13,347 persons bitten by rabid dogs have been treated. The number of deaths has been 112, only 0.2 per cent; whereas, before Pasteur's antirabic treatment was applied, the proportion of deaths, if the victims had been bitten in the limbs, was twenty per cent, and eighty per cent if they were bitten on the head.

A NEW NONPOISONOUS DENATURANT FOR INDUSTRIAL ALCOHOL, more effective than any now in use, has been discovered by the technical division of the Prohibition Bureau, Dr. James M. Doran, prohibition commissioner, revealed March 12, at a conference of industrial alcohol producers. The denaturant is a product of petroleum, and Commissioner Doran said it made alcohol extremely difficult of conversion for drinking purposes. The producers, Dr. Doran said, had given him assurance they would coöperate in the use of the new denaturant.

GENERAL CHARLES M. CLEMENT, of Sunbury, recently elected to the Board of Directors of the Public Charities Association of Pennsylvania, has assumed the chairmanship of the state-wide committee being formed by the new Division on Poor Relief. Dr. Joseph C. Doane, of Philadelphia, is chairman of the Executive Committee of the new Division. This Committee has appointed two subcommittees, one to abstract the poor laws of Pennsylvania and make recommendations for necessary changes, and the other to prepare a questionnaire to be used in visiting the eighty-one almshouses and those in charge of outdoor poor relief throughout the State.

A RECENT *Monthly Bulletin* of the Philadelphia Department of Health is an anniversary number devoted to the thirty-one years of service of Dr. A. A. Cairns in the service in the interest of the health of Philadelphia. To quote from the bulletin: "Beginning in the ranks as a medical inspector in the Bureau of Health, February 13, 1899, Dr. A. A. Cairns has occupied advanced positions in the Department of Public Health, having been appointed chief medical inspector in 1904, in which capacity he served for twenty-one years. In recognition of his services he was advanced to Director of the Department of Public Health, 1928."

MORE THAN THIRTY YEARS AGO four girl students in the Woman's Medical College, Philadelphia, discovered that their birthdays came within a few days of each other in March. They began a series of joint celebrations of their birthdays and have continued without a break. They are Drs. Ella William Grim, of Rose Valley; Mary Buchanan, Jeannette Sherman, and Florence Richards, all of Philadelphia. The first three are members of the staff of the Woman's Hospital, and Dr. Richards is medical director of the William Penn High School for girls. This year they were guests of Dr. Grim.

DECLARING THAT BETWEEN FORTY AND EIGHTY PER CENT of all adolescents were infected with tuberculosis, Dr. William Devitt, in charge of Devitt's Camp, a sanatorium for tuberculosis cases, urged the systematic and thorough health examinations not only of children but of all age groups. "No age group is immune from this disease," Dr. Devitt said in an address at a Public Health Night meeting under the auspices of the Philadelphia County Medical Society. We view with alarm the present tuberculosis incident among young girls—more than twice as many than among boys of the same age group. Dr. A. C. Morgan presided at the meeting.

THE LICENSING COMMISSION, of London, England, is receiving evidence from some of the most prominent medical men of the Kingdom on the effect of alcohol on the human system. Their testimony on the cocktail seems at times to differ widely. Sir George Newman, chief medical officer of the Department of Health, is outspoken in his condemnation of the cocktail. His opinion is based on the grounds that an "unnatural" mixture of liquors, usually taken on an empty stomach, eventually destroys the appetite which it seeks to induce. Dr. Henry Dale, director of the National In-

stitute of Medical Research, hesitates to disapprove the concoction. He says it might give an appetite to a man laboring under a mental tension and thus help him enjoy his meal.

After eating the flesh of a pig suffering with trichinosis, two citizens of Wayne, Pa., died, and fourteen were taken seriously ill, in February. According to an investigation conducted by the local township board of health, two of the victims bought a pig from a farmer in the community. The animal was butchered and divided. The next day a dinner party was given and after the meal was eaten the first of the guests complained of pains in the stomach and legs. The others were stricken at intervals in the next two days. "When the case was reported to us," said Dr. Richard P. Leinhardt, of the local health board, "we confiscated what was left of the meat, and had it examined. The investigation disclosed the presence of trichinæ organisms."

The eightieth anniversary of the foundation of the Woman's Medical College of Pennsylvania was celebrated as Founder's Day on March 11. After a visit to the new site of the college a special program was conducted in the old building on North College Avenue under the direction of Dr. Martha Tracy, dean of the College. One of the interesting features about the changing of the site for the college is the task of finding the corner stone of the old building so that its contents may be transferred to the new one. Owing to the enlargement of the old college at different periods it is not certain where the corner stone is placed. Architects believe that by making a careful investigation and by studying all records they will be able to find it with its historic contents.

President Harry G. Samson, of the Pittsburgh Federation of Social Agencies, announced on February 13 the appointment of Dr. George A. Lundberg, of the University of Minnesota, as director of the bureau of social research, recently created as a division of the Federation through a grant from the Buhl Foundation. Until recently, Dr. Lundberg was associate professor of sociology in the University of Pittsburgh. He has taught this subject also in Wells College and in the State Universities of Washington and Minnesota. He is the author of *Social Research,* published last year; *Child Life in Tacoma,* and *Poor Relief Legislation in Minnesota;* and the co-author of *Trends in American Sociology;* and has also written numerous reports and articles published in the leading journals of sociology.

The magazine *Time* for February 17, beginning on page 30, has an account of a meeting of the American Bureau of Chiropractic held in New York City early in February. "B. J." Palmer, the son of the founder of chiropractic, "restricted himself at the meeting to advising his colleagues, colloquially, on how to boost their business, which seems generally in a poor way. One way was to use a diagnostic machine, a 'neurocalometer,' which he helped to invent. The chiropractor is to apply this apparatus to his patient's spine, and it 'will indicate how poorly nerve impulses are flowing, and thus will guide the chiropractor where to apply his hands.'" There were 50 apparatuses at the meeting, to be sold at $150 each. Another problem discussed was "How are you to charge what the case ought to pay?" This resolved itself into a question of salesmanship.

Dr. Michael Margolies, of Chester County, in his president's address, delivered February 18, stated that their society broadened its field in 1929 by having meetings with the various societies that have a distinct relation to the practice of medicine. At a joint meeting with the county veterinary society, the "Prevention of Malta Fever" was discussed; and a meeting with the pharmacists as their guests advocated a closer relationship. A Committee on Health and Welfare was appointed to reduce the high infant and tuberculosis mortality in the county. He stressed the need for the county medical society guiding the activities of lay organizations, working on the problems of preventive medicine and public health. A speakers' bureau was advocated to supply speakers on medical topics to lay organizations.

The *Pediatric Bulletin* is the title of a new publication which issued its first number in October. Dr. Harry R. Litchfield is editor, and the journal is published by the Department of Pediatrics of the Brownsville and East New York Hospital. An editorial foreword states that the bulletin will act as a sort of review and summarization of the works of the department, with descriptions of unusual cases given in detail. It is further intended to assist and stimulate the more complete utilization of the medical and surgical pediatric material at the service of the hospital. At present the Bulletin will be issued semiannually, but more frequently if sufficient material is presented to the editor.

The fifty-seventh annual meeting of the National Conference of Social Work and Associate Groups will take place in Boston, June 6 to 14. More than forty groups in various fields of social work will meet at that time. The Conference will be formally opened on the evening of June 8 by a presidential address given by Dr. Miriam Van Waters, referee of the Los Angeles Juvenile Court. The Conference began originally in 1874 as an organization for the discussion of problems common to boards of state charities, and has grown into a general gathering of social forces, with representatives from fields concerning immigration, family case work, health, neighborhood life, dependency, delinquency, mental hygiene, and industrial and economic problems. Attendance at the Conference is open to any who wish to attend. Headquarters will be at the Statler Hotel.

The recent issue of *The Motion Picture* gives notice of a suit being brought by Mr. Ivan Abramson and the Graphic Film Corporation, naming forty-eight individuals and corporations in the motion-picture industry. The letter claims that Mr. Abramson's misfortune and cessation of importance in the motion-picture industry is due to the type of picture which he persistently produced and offered for exhibitions, as, "Enlighten Thy Daughter," "Sex Lure," and "Forbidden Fruit." The responsible elements in the motion-picture industry, exhibitors, distributors, and producers alike are anxious to have this case come to trial, because they have reached the conclusion that the theater is not the place in which to attempt the instruction of youth in sex hygiene, as that duty belongs to the home, the medical profession, and the school. It is interesting to have this concerted opinion of the motion-picture industry.

An appreciable increase in the number of accidents occurring in Pennsylvania industries was noted in January in reports to the State Bureau of Workmen's Compensation. One hundred and eighty-three persons lost their lives in accidents, an increase of twenty-two over January, 1929, despite a coöperative movement between the industrial companies and the State Department of Labor and Industry to make 1930 a low-record year in fatalities. Forty-four per cent of all deaths in January occurred in or about coal mines. Accidents in anthracite mines were responsible for forty-four deaths, five more than a year ago, and thirty-six were killed in bituminous colleries, an increase of nine. Manufacturing plants were the scene of thirty-one fatalities; construction and contracting were responsible for twenty-one; quarries, two; steam railroads, twelve; public utilities, five; retail stores, nine; and State and municipal governments, nine.

Deaths from automobile accidents increased 12 per cent during 1929 among the 19,000,000 industrial policyholders of the Metropolitan Life Insurance Company, it was announced. On this basis the company estimated that 31,400 deaths during the year were attributable to automobiles in the country's population as

a whole. One half of all those killed were pedestrians, and the gross increase over the previous year was greater among pedestrians than for any other type of automobile victim. The number of pedestrians killed was a little more than one out of every 4000 of the population. A decline in grade-crossing accidents was noted—from nine deaths per million in 1928 to eight per million in 1929. Collisions between two automobiles caused a larger number of deaths, or twenty-four per million, compared with sixteen per million in 1928, while deaths from automobiles running into fixed objects rose from seven per million in 1928 to eleven per million last year. The death rate from exhaust-gas asphyxiation doubled, going from one to two per million.

More than a million and a half leaflets prepared by the Five County Medical Societies of Greater New York have been distributed by the Board of Education to the school children of New York City, as one of the supporting measures of the health campaign being waged by the county societies for the improvement of public health through preventive measures of medicine. The leaflet urges parents to have a health examination for themselves and their children, and gives a frequency schedule of such health examinations to be carried out according to the age scale, which is as follows: The infant should be examined once a month; from six months to two years, once every three months; from two years to five years, once every six months; from six years to twenty-five years, once a year; from twenty-five years to forty-five years, once every two years; from forty-five years to sixty-five years, once a year; from sixty-five years and over, once every six months.

With the completed structure ready for occupancy, Philadelphia has, in the new Institute of Mental Hygiene of the Pennsylvania Hospital, an establishment unique in the field of preventive science, which gives a tremendous impetus to mental and nervous study in that section of the country. This huge structure occupies a tract of ground on Forty-ninth Street, just above Market. With this new institute as a center it is planned to develop a community-wide service in mental hygiene, which will extend into the homes and schools and reach down to the children of the city. Through an arrangement with the University of Pennsylvania Medical School and other institutions of training in Philadelphia, all the training work in this particular field will be carried on in the new institute of Mental Hygiene. Dr. Earl D. Bond, one of the country's most eminent authorities on mental and nervous conditions, is the medical director of the new institution. Dr. Bond states that the institute is "intended to be a place where things learned in the practice of psychiatry can be applied to everyday life."

Several hundred men and women representing Philadelphia and near-by counties, including leaders of the medical profession and pioneer suffragists, attended a dinner on February 14 in the Bellevue-Stratford in honor of the eighty-third anniversary of the birth of Dr. Anna Howard Shaw, famed physician and champion of women's rights. Mrs. James Starr, Jr., president of the board of the Woman's Medical College, presided. Speakers were Secretary of Labor Davis; Dr. William G. Morgan, of Washington, president-elect of the American Medical Association; Mrs. Carrie Chapman Catt; Mrs. J. Willis Martin; and Dr. John A. McGlinn, president of the Philadelphia County Medical Association. Discussing plans for the dinner, Mrs. Starr said: "We are celebrating the anniversary of Dr. Shaw's birth with special reference to her work in medicine and to honor the vision which she had of the great possibilities for preventive medicine. It is our plan to make this dinner an occasion for disseminating more intensively than ever before knowledge of the use and value of preventive medicine, particularly for self-supporting women, although this modern science should be availed of by every one. The dinner is to direct attention also to the new opportunities for service in the field of preventive medicine, which will be afforded by the Anna Howard Shaw Department of Preventive Medicine in the new college building now being erected at Falls of Schuylkill."

The following Pennsylvania medical reserve officers have been assigned to the 1300th Service Unit, regular army inactive: Capt. Wm. H. Brennen, Meadville, and Capt. George McC. Dickson, Adamsburg; Col. Alfred J. Ostheimer, Philadelphia, to the 1307th Service Unit; Major Charles J. Cole, Jr., Elkins Park, to the 1312th Service Unit; Major Harold F. Baker, Muncy, to the 1310th Service Unit; Major Alexander L. Gillars, Philadelphia, to the 1318th Service Unit; Major David H. Keller, Stroudsburg, to the 1319th Service Unit; and Major Henry A. Gorman, Hamburg, has been relieved from assignment to the 34th General Hospital.

Major David Kaufman, Altoona, has been assigned to the 38th General Hospital as assistant chief of surgical service.

The Civil Legion is requesting application for membership. To those who during the World War served in the nonuniformed brigades—the Selective Service Organization, the War Preparedness Boards, Four Minute men, Councils of Defense, and other authorized civil activities—there is just one organization—the Civil Legion. To its members, The Civil Legion is what the American Legion is to the ex-service men. It gives to the National Preparedness Policy an organization as essential to it as is the organized reserve to the army; furnishes an authorized silk American flag for draping the caskets of deceased members. The surviving war governors constitute the National Advisory Board. Two armies rushed to the National colors in the World War cause; both served loyally. One was made up of the youth—clean, keen, and eager to make the greatest sacrifice. The other—denied the honor and privilege of wearing the uniform, made up the civil army, the nonuniformed brigades. Chapters are being organized in every city and county throughout this country. The membership fee, including one year's dues is $5. Application for membership should be made to John P. Carey, secretary, 163 W. Washington Street, Chicago, Ill. Rt. Rev. James H. Darlington, of Pennsylvania, is president.

Somewhere in the vaults of the Lower Manhattan financial district there lies a fund of $10,000,000 which can be spent only to buy happiness for mankind. Although the money, set aside under special provisions in the will of the late C. Harold Smith, of New York, has been available for months, it is still unspent because a brand of happiness worth ten millions of dollars has not yet been found, according to *Woman's Home Companion*. More than 100,000 persons have offered suggestions as to how the money could be spent for the best interests of mankind. From these the best were selected as prize winners, but guardians of the fund are still undecided whether or not they have found the most advantageous way in which to dispose of it.

The winning idea was that of professor Henry E. Garrett, of Columbia University. His proposal is to "stem the rising tide of mental-ill health, which bids fair to engulf us in the next few generations." He would like to see an institute with a staff composed of physicians, psychiatrists, psychologists, and social workers. It would foster research about the nervous and mental diseases of which so little is known, would give courses in mental hygiene and would give practical advice and guidance, particularly to parents of children who are truants, delinquents, and otherwise maladjusted. Despite the fact that the Garrett suggestion was awarded the prize, it is not yet determined whether or not the institute he outlines will be established.

We are giving the following information for the benefit of our members in the National Guard:

Adjutant General Frank D. Beary on February 19 made public the schedule encampment dates for the Pennsylvania National Guard. The entire guard of the State will not train as a division this summer. Genereal Beary also announced the date for examinations to qualify for a scholarship at the Valley Forge Military Academy. This scholarship is open for sons of National Guard officers. The tests will be conducted in Harrisburg on May 1, under the direction of the Department of Public Instruction.

The dates for the guard training are: Mount Gretna, Pa., July 19 to August 2—State staff corps, Twenty-eighth Division headquarters, special troops, 111th Infantry, 112th Infantry, 103d Engineers, Twenty-eighth Division train, 104th Cavalry; August 2 to 16—109th Infantry, 110th Infantry, 103d Cavalry.

Fort Meade, Md.—Twenty-eighth Division Staff and selected portions of headquarters detachment; brigade staffs and headquarters companies; two battalion or squadron officers from each regiment; July 10 to August 2—Twenty-eighth Tank Company.

Tobyhanna, Pa., July 19 to August 2—176th Field Artillery; August 2 to 16—107th Field Artillery, 108th Field Artillery, 103d Ammunition Train; August 16 to 30—109th Field Artillery.

Aberdeen Proving Grounds, Md., July 9 to 23—103d Ordnance Company.

Carlisle Barracks, Pa., August 16 to 30—103d Medical Regiment.

Announcement that the Cancer Research Fund of the Graduate School of Medicine of the University of Pennsylvania has received a gift of $210,000, from a philanthropist who does not desire to have his name revealed, was made known by Dr. Josiah H. Penniman, provost of the University. The gift is the largest single contribution ever made to the Cancer Research Fund, which was established in 1928 through a gift made by Irenee Du Pont, and has enabled the Fund to reörganize its work on a wider and more comprehensive basis and to make notable additions to its research staff.

Progress in cancer research work depends upon the association of the physician, the biologist, and the chemist, and upon the close coöperation of related clinics and laboratories. Plans are now being developed for the equipment of a new clinic for modern diagnosis and treatment of tumors in the American Oncologic Hospital, of which Dr. G. M. Dorrance has been appointed chief of the clinic. Central laboratories of the Cancer Research Fund are established at 133 S. 36th Street, and here a complete tissue culture department is under the direction of Dr. C. E. McClung and Prof. D. H. Tennent. Prof. Vogelaar, of the University of Leiden, Holland, and Dr. Raymond G. Parker, until recently connected with the Kaiser Wilhelm Institute of Biology in Berlin, have been added to the staff of this department.

In addition to maintaining the laboratories mentioned, the Cancer Research Fund has made a number of grants for investigation to be carried on by research workers in collaboration with the work of the Fund.

In recognition of their work during the last twenty years in assisting policemen and firemen in need of medical attention, five Philadelphia physicians were appointed honorary members of the police and fire surgeons' division of the Department of Public Safety, January 30. In the presence of ranking officials of the police and fire bureaus, four of the physicians were sworn in by Director of Public Safety Schofield, who pointed out that the medical practitioners were really conferring an honor on this branch of the city's service in accepting the appointments. The physicians are Drs. John B. Deaver, Willis Manges, Robert G. Torrey, Robert Ivy, and Fielding O. Lewis. Over the coat lapel of each physician the Director then placed a badge similar to those worn by all physicians attached to the police and fire surgeons' service. The physicians were escorted to the Director's office by Dr. Hubley R. Owen, chief of the police and fire surgeons, who announced that in every instance he has sought assistance from his medical colleagues they have always responded promptly and uncomplainingly. "If we attempted to give official recognition to all the physicians and surgeons in this city who have assisted our medical division in the treatment of policemen and firemen the list would include practically the entire medical census of Philadelphia," declared Dr. Owen. "There are, however, a few who have been conspicuous during the past twenty years in their work for these men. Dr. J. Chalmers Da Costa for many years did practically all the operations for firemen and many policemen. He is an honorary surgeon of the fire department. It is for this reason that it was suggested these five physicians be appointed honorary members of the surgeons' section of the Department of Public Safety."

Basing its interpretation of the much-disputed right-of-way provision of the State Motor Code on a recent decision handed down by Judge William H. Keller in Superior Court, officials of the Pennsylvania Motor Federation on February 3 declared for the guidance of members that an automobile approaching from the right, and not the one which first arrives at the intersection, has prior right of way. The decision of Judge Keller was made in an appeal from the findings of a jury in the Philadelphia Municipal Court in the case of Lochetta vs. the Cunningham Cab Company. The Philadelphia Court instructed the jury that where two automobiles approach the intersection of two streets, that automobile which arrives first at the intersection has the prior right of way across.

"The effect of the instruction," Judge Keller said, "was to direct the jury to find for the plaintiff if they believed he arrived first." "The true rule," he continued, "based on the construction given the Act of 1919, in Weber vs. Greenebaum, is that the car approaching the intersection on the right of the driver of the other car had the right of way unless the first car was so far in advance as to afford him reasonable time to clear the crossing and avoid a collision. Under the Pennsylvania law the vehicle to the right, under ordinary circumstances, has the right of way," S. Edward Gable, president of the Federation, said in commenting on the decision. "But the peculiar wording of this provision of the motor code gives rise to numerous conflicting opinions and interpretations. Judge Keller's decision, however, seems to settle this question quite definitely."

More than $6,000,000 worth of construction at State welfare institutions, authorized by the 1927 Legislature, has been completed. Additional construction at the hospitals and homes, for which the 1929 Legislature appropriated more than $10,000,000, has made good progress, and with few exceptions will be completed late this year. One of the largest projects in the group was the New Eastern Penitentiary at Gratersford, in Montgomery County, now under construction. A year's cost of relief for the poor in Pennsylvania is $8,451,533, the Department of Welfare announced, after tabulating last year's reports from poor districts. This sum paid $3,791,983 for almshouse maintenance; $2,748,725 for major improvements; and $1,910,825 for outdoor relief. The average yearly almshouse population is 20,000 persons, including approximately 8000 "floaters." Straight-jackets, padded cells, handcuffs, and other mechanical means of restraint frequently pictured in cartoons and the public imagination no longer are used in State-owned hospitals for mental patients, officials of the Welfare Department said after a tour of inspection of the institutions. The hospitals have 25,164 patients under treatment for mental disorders, they reported, and only ninety of these are kept in restraint. Most of the ninety are bandaged to prevent them from self-inflicted injury. Others are given hydrotherapeutic treatment in which the patient is

placed in a hammocklike arrangement with warm water flowing over him. The soothing effect of this treatment usually puts the patient to sleep and his disturbance passes easily. In some cases, the officials reported, patients feeling mental attacks approaching ask to be placed in restraint until the attack has passed.

REPRESENTATIVE CHASE, of Clearfield, introduced a bill in Washington, D. C., Feb. 19, providing for the construction of a veterans' hospital in North Central Pennsylvania at an estimated cost of $2,225,000. The Chase Bill calls for a 500-bed institution. One of the topics discussed by the veterans and Representatives was increasing the capacity of the Coatesville Veterans' Hospital to 1200 beds and of improving administrative features of the Aspinwall Hospital.

The Pennsylvania Congressional delegation agreed to support the program of the State American Legion calling for the construction of two new hospitals in Pennsylvania and an addition to the Coatesville Hospital. The decision to back the hospital program came at the end of a dramatic recital by State Legion officials revealing what they described as "inadequate conditions" in the hospitals at Coatesville and Aspinwall. To relieve the situation and to afford disabled and diseased veterans within the State medical attention and hospital care, the legionnaires, headed by State Commander Frank L. Pinola, of Wilkes-Barre, asked that a 400-bed tuberculosis institution be erected in North Central Pennsylvania; an 800-bed hospital on League Island, Philadelphia; and an increase from 480 to 1250 beds to be made in the Coatesville institution.

Representative Porter, chairman of the delegation appointed a committee of seven Pennsylvania Representatives, veterans of the World War, who will shape the Legion's program into legislative form and introduce it in the House, if authorization for construction cannot be obtained from the Veterans' Bureau's existing building budget. Representative Welsh, of Philadelphia, was made chairman of the delegation's veterans committee, and his associates are Representatives Golder, of Philadelphia; Chase, of Clearfield; Leech, of Ebensburg; Coyle, of Bethlehem; Swick, of Beaver Falls; and Watres, of Scranton. "An examination of the hospitals and statistical data has impressed upon me," said Commander Pinola, "the fact that our disabled veterans have been sadly neglected." More than 500 veterans in all sections of the State, he said, are compelled to receive attention in State or private institutions because of lack of bed space in the Pennsylvania veterans' institutions.

THE STATE HOSPITAL FOR CRIPPLED CHILDREN at Elizabethtown will be opened with approximately twelve patients within the next three weeks, Dr. Theodore B. Appel, Secretary of Health, said on February 17. No formal exercises are being planned for the opening of the institution, but the hospital will be open for public inspection as soon as the furnishings have been installed and prior to the arrival of the patients. These twelve youngsters who comprise the initial patients are now being cared for at the State Sanatorium at Mont Alto, where the staff of nurses is also being assembled so that they may become acquainted with each other prior to the opening of the new institution. Dr. Francis Chambers, of Philadelphia, will be the medical director at the institution, and Miss Naomi Hunter, of Lancaster, will be superintendent.

The hospital, of which the first unit only has been completed, is situated on a 300-acre tract on the outskirts of Elizabethtown. The erection of subsequent units will provide an ultimate capacity for 700 or more patients. The present unit will have a capacity of 100. The institution will provide not only surgical care and treatment for the crippled children, but will also furnish occupational-therapy and physical-therapy courses. No chronic case will be accepted, the admission to the institution being limited to the children between the ages of one month and sixteen years whose condition has a prospect of improvement and rehabilitation. No mentally deficient cases will be accepted. Admission to the institution will be made on the recommendation of the medical director in each county and no fee will be charged to parents or guardian of the accepted patients. The purpose of the hospital is to prepare crippled children to earn their own living. The surgical care and treatment will be used in an effort to correct, improve, or cure the crippled condition and the occupational therapy and other educational courses will give the patient a mental and manual training with which the child eventually may be able to take its place in the world as a self-supporting individual. The physical-therapy courses will provide muscle training development so necessary to the physically handicapped. The physical-therapy and occupational-therapy courses will be adjusted to meet the needs of each individual patient, being determined largely by his or her condition and length of stay in the hospital. Dr. Appel said that when the hospital units have all been completed, Pennsylvania will have in one institution what other states now have in several.

BOOK REVIEWS

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

A TEXTBOOK ON ORTHOPEDIC SURGERY. By Willis C. Campbell, M.D., F.A.C.S., professor of orthopedic surgery, University of Tennessee, College of Medicine, Memphis. Octavo volume of 705 pages, with 507 illustrations. Philadelphia and London: W. B. Saunders Company, 1930. Cloth, $8.50.

Included are chapters devoted to classification of arthritic diseases, orthopedic methods of examination, and apparatus. The text is concise, well indexed, and with a fairly comprehensive bibliography. The chapters on dislocation and fractures are of special interest, in that they show something of the modern trend to place these cases in the hands of the orthopedist, where they properly belong. The author has presented a book useful to the undergraduate as a textbook, and of interest to the physician and surgeon as a book of reference.

SURGICAL DIAGNOSIS. By 42 American authors. Edited by Evarts A. Graham, M.D., professor of surgery, Washington University Medical School. Three octavo volumes, 2750 pages, 1250 illustrations, and separate index volume. Philadelphia and London; W. B. Saunders Company, 1930. Price, $35 a set. Volumes I and II are now ready. Volume III and separate index volume ready March 15.

The editor, together with his eleven collaborators, have constructed a work that is meant to be and is a help not only to the surgeon but to the medical colleagues as well. In addition to diagnosis, questions of etiology and pathology have been discussed where understanding of the same renders diagnosis easier; certain subjects, such as syphilis, tuberculosis, etc., are not treated exhaustively but only those aspects stressed which are of particular interest from the standpoint of diagnosis. Also but little attention is given to the detailed description of the various neeessary laboratory tests, matters rightly belonging in textbooks for that purpose. Furthermore, voluminous references to the literature have purposely been omitted. To this end the strictly clinical points of diagnosis have been emphasized but not to the exclusion of those methods of laboratory examination which are a distinct addition in reaching not a "snap" diagnosis but an accurate as well as a correct one. Again with this idea uppermost the atypical and the typical picture of a disease is portrayed. Treatment principles are only occasionally mentioned.

The book is delightfully presented, is thoroughly up to date, and is a credit to its worthy contributors.

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PHYSIOLOGY OF THE KIDNEY*†

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The past ten or fifteen years have seen a renaissance of interest among physiologists in the study of the function of the kidney. Methods, very old in principle but new in application to this field of study, have yielded and are yielding results which give promise of being unequivocal.

The reasons why, in the past, the study of the physiology of the kidney has not contributed more to the physician and pathologist in the understanding of problems of abnormal renal function are to be found in the intricacy and inaccessibility of an organ which defied direct attack. The consequent necessity of indirect experimentation resulted in information which was susceptible of more than one interpretation; hence, there being no unanimity of belief among physiologists concerning the nature of processes responsible for urine formation, the pathologist or the physician has had no compelling physiologic guide in the interpretation of the phenomena of disordered kidney function with which he has been confronted.

Within the past decade, it has been found possible to apply to the kidney of some of the lower animals those methods of direct microscopic observation which were so fruitfully used by the ancient anatomists and which in modern times have been used by physiologists to gain better understanding of the behavior of the minute blood vessels of the body. In addition it has been found possible to apply to the kidney micromethods of instrumental manipulation which permit the withdrawal of fluid from different parts of a single unit of renal function, this in turn permitting the study of urine at various stages in its formation within that unit.

To some extent, this study has clarified our ideas concerning the nature and extent of processes which are operative within the kidney. We can scarcely doubt that its continuation will go far toward the solution of many of the problems both of normal and of abnormal renal physiology.

By unit of renal function, is meant, of course, the uriniferous tubule together with the malpighian body from which it arises. The latter contains the tuft of glomerular capillaries, each capillary of which is covered by very thin epithelium, and this is supplied with blood via the afferent arteriole and emptied of blood by the efferent arteriole. The peritubular capillaries originate from the efferent vessel, and we accept the evidence obtained in the past twenty years which shows that all, or very nearly all, the blood which flows through the renal vessels passes through the glomerulus before reaching the capillaries which supply the tubules.

The complete structural dissimilarity of the malpighian body and the renal tubule requires us to discuss their functions separately. For nearly ninety years anatomists and physiologists have agreed that the malpighian body must be the place where the headwaters of the fluid stream which is to become urine arise by separation from the blood. A spherical cell, formed by the thin, elastic capsule of Bowman, its cavity continuous with the lumen of the tubule; inserted into it a capillary tuft of relatively enormous surface, fed by one small vessel and emptied by a smaller; "why is so wonderful an apparatus placed at the extremity of each uriniferous tube" if not to furnish the fluid which is to be elaborated into urine?

Ludwig was the first to see clearly that the disposition of blood vessels within the malpighian body was precisely suited to favor the escape of fluid through the walls of the glomerular capillaries because of the blood pressure within them. He propounded the theory that glomerular fluid is a protein-free filtrate, that the force which produces it is pressure derived from the heart. He regarded filtration as the sole process by which the substances that the kidney excretes are separated from the blood.

Others, coming later, denied the adequacy of this view. They were unable to find histologic evidence in the glomerular structures of injected

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dyes which the kidney was eliminating when it was excised. They were unable to believe that the kidney is so uneconomical as to separate seventy liters of fluid from the blood containing 0.05 per cent of urea in order to accomplish the excretion of two liters of urine containing 1.5 per cent (Heidenhain). They conceived, therefore, that while physical conditions existed in the glomerulus for the separation of fluid from the blood because of pressure, the epithelium which invested the capillaries possessed a vital, secretory capacity to control the separation of fluid in the glomerulus, both with respect to volume and composition.

In amphibians and reptiles, it is possible during life to subject the kidney to direct microscopic observation. It is also possible to thrust finely-pointed glass or quartz tubes directly through a capsule of Bowman into the intracapsular space surrounding the glomerulus and to collect fluid as it issues from the blood vessels. The amounts obtainable are minute, but they are susceptible of chemical testing, provided one learns to conduct his tests in minute capillary tubes rather than in test tubes. It is possible also to block the neck of the tubule during the collection of glomerular fluid so that there is complete certainty that the fluid originates within the malpighian body and is not contaminated with fluid from any other source.

Qualitative tests carried out on glomerular fluid obtained from the frog and the Necturus (mud-puppy) show that it contains no protein (as a rule); its alkalinity is of the same order as that of the blood; it contains chlorin, sugar, urea, phosphate, sodium, and potassium, and also some of the dyes which have been used in the study of the kidney, provided these have been so injected that the kidney is eliminating them during the period of glomerular fluid collection.

Such results as these tell us that the glomerular fluid *resembles* a filtrate from plasma. Accurate and comprehensive comparisons of the quantitative composition of glomerular fluid and blood plasma, were they available, might permit us to say that the glomerular fluid *actually is* or *is not* a filtrate. Progress in this direction has already been made. Three separate quantitative studies of the glomerular fluid from frogs have been made in our laboratory during the past fifteen months.

In one, the total molecular concentration of glomerular fluid has been compared with the total molecular concentration of samples of blood plasma collected at the same time. The application of Barber's method for this purpose was first suggested and undertaken by H. L. White, of St. Louis. It consists in the introduction of the minute droplet of glomerular fluid into a glass capillary tube, on each side of it is a similar minute droplet of plasma. The tube is sealed and measurements of the length of the three drops of fluid are made during forty-eight hours. If the middle (glomerular urine) droplet increases in length at the expense of the two adjoining ones of plasma, this means that the original molecular concentration of the glomerular urine was greater than that of the plasma —water passes from the less to the more concentrated fluid. If the middle droplet of glomerular urine decreases in size, it means that its total concentration was less than that of the plasma. More than forty experiments of this sort, made by Dr. A. M. Walker, show consistently that the total concentration of the fluid which is separated from the blood in its passage through the glomerulus is approximately the same as that of a protein-free filtrate from the plasma.

Somewhat similarly, apparatus has been designed and made with which it is possible to compare the electric conductivity of our minute samples of glomerular fluid with that of samples of plasma simultaneously collected. The capacity of a fluid to conduct the electric current depends upon the concentration of ionizable salts which it contains. Hence, if two fluids exhibit the same degree of electric conductivity, this means that the number of ions per unit volume is the same in both.

More than twenty satisfactory experiments made by Drs. L. E. Bayliss and A. M. Walker have shown that the electric conductivity of frogs' and mud-puppies' glomerular urine is the same as that of the plasma.

Finally, we have found that, if suitable precautions are taken, it is possible to make quantitative estimations of the intensity of color of a very minute amount of fluid contained in a glass capillary tube. This knowledge permits us to find out in what concentration a dye, such as phenolsulphonephthalein or indigo carmine, is eliminated through the glomerulus after it has been injected into the blood; and we can compare this concentration with that which obtained in the blood.

Both of these dyes have been studied. Satisfactory experiments have been made on twenty-one frogs and in all of these the concentration of dye in the glomerular fluid is the same (within reasonable limits of error of the methods) as that which would be expected if the blood plasma were filtered through a collodion membrane.

From these experiments, made with the utmost care, we conclude that the fluid which is-

sues from the blood, through the walls of the glomerular capillaries, corresponds in its composition, so far as this has been studied, to a protein-free filtrate from the blood plasma. If we show, as Hayman has shown, that the blood pressure in the glomerular capillaries is amply sufficient to overcome the osmotic resistance to filtration which the plasma proteins are capable of exerting, it seems to me that we are justified in asserting that direct proof has been afforded in support of the view that the glomerular process is one of filtration.

It would be unfair not to mention that two series of published experiments of this same sort exist, the results of which do not agree with the conclusion just stated. One was made by Wearn and myself and in seven experiments seemed to show that the chlorin content of glomerular fluid is significantly higher than that of the blood. I am frank to say that I am now skeptical concerning the accuracy of these results and by way of excuse can only point out that the technic involved is extremely difficult. H. L. White has published twelve comparisons of the total molecular concentration of glomerular urine and plasma from mud-puppies. The glomerular fluid was the more concentrated. I cannot criticize his work, but can only say that in our repetitions of it we found the two fluids the same.

It will be understood that the conviction to which these recent and very direct experiments have led us is in harmony with a vast amount, possibly the majority, of experimental evidence on this subject, which has been accumulating over many years. The character of this evidence has, however, for the most part been far from direct. It seems to me not improbable that we shall be able presently, if indeed we are not now, to speak of glomerular filtration as a proved fact rather than as a hypothesis.

Having decided that the available evidence forces us to believe that the glomerular process is essentially one of filtration, you may be interested in knowing at what rate the filtrate is formed, particularly in comparison with the rate at which urine is eliminated from the whole kidney. It is important to know whether the glomerular process alone is adequate to clear the blood of the substances which it is the business of the kidney to excrete.

We have made many measurements of the amount of the fluid which can be collected from a single malpighian body of a frog's kidney, in a measured time. The highest figure in our records is about 0.004 c.c. per hour; we have many instances of collection at a rate of 0.001 c.c. per hour. The high figure mentioned (0.004 c.c.) was obtained in an experiment in which the fluid accumulated in the collecting pipette against a pressure of a few millimeters of mercury. It was not, therefore, being sucked out, and we have reason for believing that the conditions within the malpighian body, when it was being collected, were not greatly different from those which normally obtain there.

The kidney of the species of frogs which we have usually used, normally contains 2000 glomeruli: sometimes more, rarely less. The experimental conditions usually are such as to make us sure that all, or nearly all, the glomeruli are functioning during our collections of glomerular fluid from one. If each of 2000 glomeruli should eliminate 0.004 c.c. of filtrate an hour, the hourly total for the entire kidney would be 8 c.c.; if each were eliminating it at a rate of 0.001 c.c., the hourly total would be 1 c.c. But when one inserts a tube into the ureter of a frog's kidney and collects and measures all the urine which issues, he rarely finds the rate of urinary excretion to exceed 0.1 or 0.2 c.c. per hour. It seems certain that the volume of fluid separated from the blood as it flows through the glomeruli is vastly greater than is the volume of urine which issues from the whole kidney. More than 90 per cent of the fluid which enters the uriniferous tubule from the glomeruli is lost before reaching the ureter.

In experiments similar to these, the animal has been injected beforehand with phenolsulphonephthalein, and the amount of this dye in the urine obtained from the ureter in an hour, or half an hour, estimated. Blood was taken at the beginning and at the end of the urine collection and the contents of phenolsulphonephthalein determined. Finally, at the end of the experiment the total number of glomeruli in the whole kidney were counted. The numbers so obtained give us the means for calculating how much fluid must have been eliminated by each glomerulus in order to account for the amount of phenolsulphonephthalein excreted by the whole kidney.

In one experiment 0.1 mg. of phenolsulphonephthalein was excreted by the kidney in half an hour. The blood during that half hour contained 9 mg. phenolsulphonephthalein per 100 c.c. We know that a protein-free filtrate from that blood would contain about 8 mg. per 100 c.c. Hence, the volume of glomerular filtrate required to clear the blood of that 0.1 mg. of phenolsulphonephthalein was 1.25 c.c.

That particular kidney contained 1954 glomeruli: call it 2000. If all glomeruli were acting alike, each must have eliminated 0.000625 c.c. in the half hour if all the phenolsulphone-

phthalein left the blood via the glomeruli. This is at a rate of 0.00125 c.c. per hour. We have often collected fluid from single glomeruli at rates as high as this and on several occasions at rates much higher.

For the frog then it seems certain that the volume of fluid which is separated from the blood during a certain time as it flows through the glomeruli is large enough to clear the blood of all of the phenolsulphonephthalein which the kidney actually excretes during that time.

The facts thus far laid before you show the reasons for our feeling of certainty that the glomerular process is a physical one of filtration and that the volume of its product is very great, great enough in the animals we have studied to account for all the total excretion of at least one substance, phenolsulphonephthalein, the only one which we have thus far been able to study in this quantitative way.

In this connection it should be stated that the kidney is certainly one of the most vascular organs of the body, if not the most vascular. It is equipped with blood vessels which will permit as much as five to ten times its own weight of blood to flow through them per minute; hence, there is no difficulty in believing that the volume of blood which would be necessary for the manufacture of such large volumes of glomerular filtrate is actually available in the renal circulation.

Some of the results of recent study of the function of the uriniferous tubule may be detailed as follows.

The one thing about which we may feel the highest degree of certainty in all our considerations of kidney function is that much of the material which enters the tubule from the malpighian body in the form of a filtrate goes back into the blood as this filtrate passes down the lumen of the tubule. This process we call reabsorption.

The proof of the correctness of this statement is very direct. Some of it you have already heard. The volume of fluid collectible from a single glomerulus multiplied by the total number of glomeruli in the kidney is many times greater than the volume of fluid which emerges from the ureter. The difference between these volumes represents the fraction of the glomerular filtrate which is reabsorbed, and our figures show that it amounts to between ninety and one hundred per cent.

More objective evidence than this that fluid is absorbed from the lumina of the tubules is easily obtainable. Inject a half-saturated solution of indigo carmine into the intracapsular space of a malpighian body and watch it flow through the convolutions of the tubule. By the time it has passed through two or three convolutions you will see that instead of a blue solution it has become a suspension of blue crystals. The solution has become so concentrated by reabsorption of water from it that the dissolved dye is precipitated. Or, fill the tubules with a weak solution of phenolsulphonephthalein and hold it there either by stopping the arterial circulation or by so blocking the tubule that it cannot move on through. You will see that the intensity of color changes from light pink to intense red—a change which represents a concentration of the injected fluid to as much as tenfold its original strength.

No question then remains concerning the fact that a large fraction of the fluid which enters the tubule from the glomerulus may go back into the blood stream. Just as little is there question that some at least of the substances dissolved in the glomerular fluid are reabsorbed from the tubules and also that the reabsorption of these takes place at rates different from that of water.

Sugar is never present in detectable amounts in normal frog's urine taken from the bladder or the ureter; it is always present in the glomerular fluid drawn from the capsule of Bowman, provided the blood of the frog contained significant amounts.

The bladder urine of frogs normally contains only traces of chlorids and if the animal be kept in a pool of distilled water for a day or two, no chlorid is detectable in the urine. But even under these conditions, the chlorid content of the glomerular fluid is as high as that of the blood plasma.

Obviously then, the tubule possesses the power of restoring to the blood much of the water; all the sugar; and most, if not all, of the chlorid which has been separated from the blood by the process of glomerular filtration.

How these processes take place, we do not know. Diffusion may and probably does take part. The blood which constantly flows through the peritubular capillaries contains the plasma proteins, combined with inorganic ions. These, because of the colloid nature, exert a constant force which tends to draw the protein-free fluid in tubules into the protein-containing fluid in the blood vessels. You will recognize that this is the same force as that which causes salt solution when injected under the skin to be taken into the blood vessels.

Simple diffusion is not adequate to explain the entire process for it is certain that vital activity of cells of the tubule wall participate in the process. We can fill the lumen of the tubules and the vessels surrounding the tubules with Locke's solution from the same bottle and still

sodium chlorid and sugar will pass from the lumen of the tubule to the lumen of the blood vessel. If the Locke's solution contains some phenolsulphonephthalein, the color of the fluid which remains in the tubules becomes more intense showing that water is also passing out of the tubule. If the cells of the tubules be poisoned with a little hydrocyanic acid or very dilute bichlorid of mercury, this movement of salt, sugar, and water does not take place.

We have indisputable evidence then of the existence of active processes of reabsorption from lumen of tubule to blood stream, which bring about the restoration to the blood and hence retention in the body of substances which the body could not afford to lose. It is safe to assert that if all the water, salt, and sugar which are separated from the blood by filtration as it flows through the glomeruli were to pass out of the body as urine, the body would very quickly die for want of these substances. The glomerular process of filtration is blind, undiscriminating, and excessive. The tubular process of reabsorption is discriminatingly corrective in that it restores to the organism in proper amount and proportion those substances which its welfare requires it to retain.

As important as the capacity of the tubule to permit and to actuate the passage of fluid and dissolved substance back from the tubule into the blood is its capacity to retain some dissolved substances within the lumen, preventing their reabsorption. We may designate this as *selective impermeability* and we must believe that without this capacity the kidney would not be the effectively discriminating excretory organ that it is.

This capacity is exemplified by the action of phenolsulphonephthalein when injected into the lumen of a tubule. A dilute solution of this dye when injected becomes progressively more concentrated, thus showing the reabsorption of water. It is striking that the dye itself remains within the lumen for hours and this despite the fact that phenolsulphonephthalein is a highly diffusible substance.

It can also be shown that this capacity of tubule cells which enables them to prevent phenolsulphonephthalein from passing out through them is dependent on their vitality, for if the tubule is poisoned by hydrocyanic acid or bichlorid of mercury in minute concentration, the dye passes out through its wall as it does through a dead membrane of collodion.

I believe in the essential truth of the doctrine of the original formation of urine in the glomeruli by the filtration of a very large volume of fluid, and the elaboration of this fluid into urine by reabsorption from the tubule of those components which the body should retain, and the selective retention and hence the concentration within the tubule of those constituents which the kidney should eliminate.

Only reference will be made concerning the existence of a capacity possessed by cells of the renal tubule to secrete, i. e., actively to transfer substance from the blood into the lumen of the tubule. During the period from about 1880 to the earlier part of this century, belief was almost universal that the proximal convolutions of the renal tubule constitute a secreting structure capable of eliminating substances in concentrated form from the blood. Examination of the evidence upon which this belief is based, most notably by the late Professor Cushny, made many physiologists skeptical concerning the existence of the process. This skepticism became more pronounced when the direct evidence for filtration and selective reabsorption, which has been outlined, was provided.

In the last five years, new evidence has been obtained which is converting some distinguished physiologists. I remain, for the time being, skeptical, having a very vivid sense of the difficulties which stand in the way of direct proof.

It is my belief that diffusible substances can find entrance into the renal tubule through the cells which constitute its wall; and having so found entrance, may become highly concentrated within the lumen. If, for example, a frog's kidney is cut out of the body and immersed in a thoroughly oxygenated salt solution containing a little phenolsulphonephthalein, in the course of an hour, on looking at the kidney with the microscope, we find portions of the lumina of the tubules apparently filled with phenolsulphonephthalein in a concentration ten to twenty times as great as that of the solution in which it was immersed. This observation seemed at once to show that the tubule took up the dye from the surrounding fluid and secreted it into the tubule in highly concentrated form. But when we studied the action of certain poisons upon it, we were driven to the thought that the dye had *diffused* in and after having entered in dilute solution had become concentrated by the active extrusion of water, a process which we know goes on.

Our experiments on secretion by the renal tubule are admittedly scanty and incomplete. Even so, they seem to have revealed to us the possibility, which must of course be thoroughly studied, that diffusion from blood into renal tubule may be a considerable factor in the excretory process in the mammalian kidney.

Thus far it has not been possible to carry out

a systematic series of experiments designed to show by these direct methods the manner in which renal function is altered by poisons which have especial power in producing damage to the kidney. One small group of experiments, however, with bichlorid of mercury has yielded an interesting result. A frog, injected with a sublethal dose of bichlorid, soon becomes edematous, and this appears to be due to suppression of the power of the kidney to eliminate urine. If on the second or third day of the poisoning, the kidney be examined under the microscope during life, it is seen at once that the blood circulation through every visible glomerulus is extremely active and every capsule of Bowman is distended with glomerular urine. When a pipette is inserted into one of these capsules, glomerular fluid accumulates in it at an extraordinarily rapid rate. In a word the glomerular functions of that poisoned kidney are not only not decreased, they are actually more effective than in the normal kidney, and yet the whole kidney is not eliminating urine.

If one injects into one of these capsules in the living bichlorid kidney a little phenolsulphonephthalein solution and watches it flow down the tubule, one sees something very different from that which is to be seen when the same experiment is made on a normal kidney. Instead of remaining discretely within the lumen of the tubule and becoming concentrated there by the reabsorption of water, it diffuses out of the tubule into the surrounding tissue and quickly disappears from view.

This observation means that the bichlorid of mercury has destroyed the selective impermeability of the renal tubule which in the normal kidney is responsible for the retention and concentration in it of those substances which it has to excrete. We can show that the power of tubule cells to transfer water from lumen into blood is also lost. We may further conceive from this evidence that instead of selective reabsorption of material from lumen of tubule to blood, we have in the poisoned kidney a nonselective, undiscriminating return of the glomerular filtrate to the blood because of the drawing osmotic force of the proteins of the blood plasma in the peritubular capillaries. Such fluid as may escape this force and issue from the ureter will obviously resemble closely in composition the original plasma filtrate.

From this observation and reasoning we arrive at a conception of destruction of excretory function of the kidney which accords with the facts which we can actually demonstrate. If the conception is true, it indicates that the obvious way in which to make a bichlorid kidney serve as an excretory organ is to increase the volume of glomerular filtrate so that this will flood the tubules and not give time for osmotic return of all of the filtrate to the blood. In the treatment of several very severe human cases of bichlorid poisoning, one of my colleagues, Dr. Hayman, has met with very encouraging results following the application of these principles.

Whether the observations will throw any light upon the complex problems of nephritis remains to be seen.

It seems obvious that what nature accomplished when she provided the kidney with a million minute units, all approximately alike, was the effective arrangement of relatively enormous surfaces within a very compact space. Calculation shows that the total area of the glomerular capillaries in a single human kidney is of the order of two square meters. We regard this area as a filter bed; the fraction of this which is in operation at any one moment depends upon the fraction of its million inlets and outlets (afferent and efferent vessels) which are open. If much material is to be excreted all are open; if little, not all are open. Pouring over this filter bed is the stream of blood delivered by the renal arteries, which in extreme cases may be as much as five to ten times the weight of the kidney, per minute. The thickness of the layer in contact with the glomerular capillary endothelium is less than 0.01 mm.; it is under a pressure equal to half the arterial blood pressure.

From this fluid, constantly renewed many times per minute, a cell-free, protein-free filtrate is expressed and delivered into the tubules. We have reason to believe that in each human kidney its amount may be in extreme cases as high as 75 c.c., possibly 100 c.c., per minute, enough to carry out of the blood all the urea, creatinin, etc., which the kidney excretes. Flowing through the tubules, it passes over a surface, which in aggregate extent amounts to more than two square meters, and again the thickness of the layer of the fluid is no more than 0.01 mm.

On the other side of the epithelial membrane which constitutes the tubule wall is the flowing stream of blood, more concentrated than the blood in the aorta because of the loss of the filtrate which has been separated in the glomeruli. This blood exerts a constant osmotic force upon the fluid on the other side of the membrane, i. e., within the tubules, which tends to draw it back into the blood. This force is opposed by a selective impermeability of the wall, some substances being permitted to go back, others retained. The cells also possess an active power of thrusting substances through it from the lumen of the tubule into the blood, as chlorid,

sugar, and water. The combination of diffusion backs into the blood and active extrusion results in the elaboration of the great volume of glomerular filtrate into a small volume of finished urine in which some of the constituents are many times more concentrated than in blood; others, less concentrated.

If the vitality of the epithelial wall which separates the glomerular filtrate from the blood be sufficiently damaged, then the unopposed force residing in the osmotic pressure of the blood proteins may draw back the glomerular filtrate and its dissolved constituents without selection and discrimination and partial or complete anuria may result.

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DIFFERENTIAL DIAGNOSIS OF BULLOUS DISEASES*

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The commonly accepted definition of the term bleb or bulla is such that at times it may depend on the judgment of the individual observer whether an eruption is to be classified as of bullous or vesicular character, the essential difference between the two being one of size only, bullæ varying in size from a split-pea on up.

For the purposes of this paper, only those diseases in which the lesions are large enough to be of undoubted bullous character will be considered. Inasmuch as most of the bullous eruptions represent very severe grades of inflammation occurring during the course of a disease which does not ordinarily show bullous lesions, or at times are accidental occurrences, they tend to run an acute course leading to recovery with slight or no inconvenience to the patient's general health. In contrast to this, the most typical, although not most common, expression of bullæ, namely pemphigus, not only tends to run a chronic course and undermine the physical well-being of the patient, but very often terminates in death. For this reason, the differentiation of bullous eruptions assumes importance, not only from the standpoint of treatment but also from that of prognosis.

The etiologic conditions under which bullæ may occur are mainly of two types:

I. *The obstructive type, due to mechanical or dynamic causes.*

Under this heading may be included those conditions in which there is obstruction with mechanical blocking and accumulation of fluids in the tissue as seen in sudamina and dyshidrosis.

Sudamen is seldom mistaken for other bullous conditions, as rarely do any of the lesions become large enough to be considered blebs. The eruption is seen in those who are gravely debilitated and especially when associated with high fever. The lesions are noninflammatory, without hyperemia or areola and tend to disappear in several days.

In dyshidrosis, the beginning deep-seated lesions, their increase in size and number, some bleb formation together with localization of the eruption to the palms and soles, render the diagnosis a matter of no difficulty.

II. *The acantholytic type, due to preliminary deterioration of vitality in the prickle-cell layer of the epiderm. This type embraces the majority of eruptions in which bullæ are seen.*

Acantholysis is rarely idiopathic but is a secondary effect of some injurious influence acting upon the trophic nerves of the epidermis. The source of injury may be:

(A) Extracutaneous, due to traumatism, extreme changes in temperature, acrid substances, such as cantharides, iodin, Rhus, and the like.

(B) Intracutaneous, as an incidental effect of a large variety of cutaneous diseases, such as erythema multiforme, erysipelas, urticaria, lichen planus, syphilis, especially in infants; also as a result of local infection, the organism penetrating to the rete and the injurious toxins causing bleb formation as seen in impetigo contagiosa.

(C) Infracutaneous, the injurious influences proceeding from some disorder interior to the skin, as seen in septicemia and the ingestion of certain drugs.

If some injurious influence is acting upon the skin and causing a bullous eruption, it becomes apparent that an accurate history is of the utmost importance for differential purposes. From the history alone one may often be able to distinguish between what on first appearance would seem to be a grave condition but in reality is only an accompaniment of one of the ordinary eruptions. The history should include occupation, exposure or contact with chemicals or plants, the history of any preceding eruption, and the history of recurrences. Age aids in differentiation in few of the conditions but is important mainly in syphilis and urticaria. Duration plays an important part in distinguishing bullous eruptions as most of them are acute in type, the exceptions being pemphigus and dermatitis herpetiformis.

The bullous eruptions most commonly seen are included in the first division of the acan-

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tholytic type, the extracutaneous. The fact that the bullæ are caused by contact with some external irritant makes it evident that most of the lesions will occur on the exposed parts, the face, hands, forearms, and at times, the genitalia. The blebs are accompanied by vesicles and considerable erythematous swelling. Itching as a rule is intense.

The next most common are the intracutaneous group. First, bullous erythema multiforme, which occurs mostly around the hands and face and is usually accompanied with the ordinary symptoms of the disease, namely, papules and at times wheals and iris lesions; itching as a rule is absent. The attack is of short duration, lasting from ten days to two weeks, and there is very often a history of seasonal recurrences.

Bullous urticaria is most common on the extremities and is associated with the ordinary features of urticaria. Itching is a prominent symptom. The condition usually is seen only in infants and children and runs a chronic course, tending to recur usually in summer time. Bullous impetigo contagiosa is usually located about the face and neck. The finding of the typical honey-colored crusts on mildly inflammatory bases, in association with the blebs, makes the diagnosis as a rule very easy.

Bullous syphilis is rare and is usually congenital, appearing at or just after birth. The eruption is most numerous about the palms and soles and shortly becomes purulent and is associated with other symptoms of the disease.

At times bullæ occur in erysipelas but the systemic symptoms, the sharp margination of the eruption, and its brawniness will mark the diagnosis.

Lichen planus occasionally will present bullæ, but usually only in those cases in which arsenic has been given. The finding of typical, flat, umbilicated, violaceous papules of lichen planus will furnish the clue to the diagnosis.

In the third, or infracutaneous group, bullous eruptions are rare. The iodids at times cause them. The eruption occurs as a rule on the face and extremities and is accompanied by the typical lesions caused by the ingestion of iodids. The finding of iodin in the urine will make the diagnosis certain. Arsenic, if given either intravenously or by mouth, will at times cause a bullous eruption, usually manifesting itself as a herpes zoster.

Pemphigus and dermatitis herpetiformis have been purposely omitted from all the foregoing etiologic classifications for it is a moot question under which classification these diseases should be included. Dermatitis herpetiformis is usually generalized with a tendency to small groups of three or four blebs, usually with associated vesicles. It is very itchy, it is chronic and has exacerbations, the eruption as a rule being followed by staining. Pemphigus is usually generalized with irregularly scattered, well-distended, round or oval blebs, often arising from the sound skin and usually with systemic disturbance.

Therapeutics at times may play a part in distinguishing the bullous conditions.

In dermatitis herpetiformis the disease is controlled by arsenic. In erythema multiforme the use of one-sixth of a grain of cyanid of mercury intravenously will in most instances abort the condition. In impetigo, the use of ammoniated mercury will very shortly stop the bleb formation. In urticaria, the use of intestinal antiseptics and a change in diet will often stop the condition.

In conclusion, the most important factor in arriving at a differential diagnosis in bullous eruptions is an accurate history of the case under consideration.

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ABSTRACT OF DISCUSSION

FRED D. WEIDMAN, M.D. (Llanerch, Pa.): Dr. Strauss has presented this subject from the point of view of the dermatologist and has systematically outlined the various important manifestations and circumstances, even apart from the bullæ which enter into the more or less complicated problem of dermatologic diagnosis of the bullous dermatoses.

It should be emphasized that while it is true in this class of dermatosis we are rather restricted if we call upon laboratory examinations for help, we do not use what we already have, particularly in the iodid and bromid dermatoses. Both of these tests are very easily performed; really, they are not laboratory tests, but can be made in the office, just as one does a urinalysis. An exceedingly sensitive test for the detection of the iodid dermatosis is the ordinary starch test. The suspected substance, usually urine, is first acidulated with nitric acid, boiled starch is added, and if iodin is present there will be the well-known blue reaction.

The second test, for the bromids, is likewise very simple, especially since Dr. Wile brought out his fluorescein test paper. After adding potassium permanganate and sulphuric acid to the urine, the simple application of the test paper to the urinary vapors is all that is necessary. In the presence of bromid in the vapors it results in a very distinctive reaction, changing the paper from yellow to pink.

There is a particular point in respect to both of these tests for which we are indebted to Dr. Wile, and that is sometimes these halogens are not released from the tissues and do not appear in the urine and become available for testing unless they are artificially released by the physician. This is done by cramming the patient with sodium chlorid, orally, subcutaneously, or intravenously. The latter procedures, at the same time, comprise the rational therapy.

Often we have seen cases presented before dermatologic societies with a question as to the diagnosis, with the emphasis laid on bromid eruption or iodid eruption,

and yet the presenter had not applied the simple test which would at once almost certainly eliminate one or two of the possible diagnoses from consideration.

We have also had a clinical advance in dermatologic diagnosis in the form of Jadassohn's iodid test as between pemphigus and Duhring's disease. This emphasizes what has been pointed out several times, namely, that dermatology is attaining a position as a specialty independent of internal medicine.

TUBERCULIN IN DIAGNOSIS AND TREATMENT IN INFANCY AND CHILDHOOD

With a Method for Determining the Appropriate Therapeutic Dose in the Individual Case*

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The diagnosis of tuberculosis in infants and children is often difficult. Both the lesion of first infection, or juvenile type, and the tuberculosis of adolescence, due to reinfection, can exist without producing symptoms. The various symptoms that occur when the lesion is active and manifest have been observed in other diseases, particularly in nontuberculous upper respiratory infection with resulting toxemia.

The physical signs that occur in manifest tuberculosis of the adult or adolescent type are absent in latent tuberculosis. There are few physical signs indicative of juvenile tuberculosis, and none that are pathognomonic. D'Espine's sign, interscapular dullness, and exaggerated bronchovesicular breathing are unreliable as indicating tuberculosis.

The x-ray is a most valuable diagnostic aid, without which there can be no absolute diagnosis of hilum tuberculosis, although tracheobronchial lesions, conspicuous enough to be mapped out in x-ray plates, demonstrate the presence of advanced infection.

Attention has recently been directed to the mistakes made in the x-ray diagnosis of both the childhood and the adult types of tuberculosis.

Tuberculin Test

According to Krause, tuberculin testing is the only procedure, which, *unassisted,* can settle a diagnosis of tuberculosis, but only in a negative way. A case presenting every other classical feature of hilum tuberculosis cannot be called tuberculous, he states, if it lacks a positive skin test. Unusual intensity of reaction he regards as undoubtedly meaning comparatively recent infection and strong reactions in a large proportion of cases as standing for recent extension or metastasis of existing tubercle.

In tracheobronchial tuberculosis, Opie believes the accompanying tuberculin reaction may give valuable evidence concerning the activity of the process; that with an intense reaction a progressive lesion may be feared, whereas with scant or no reaction the disease is probably in process of healing. His studies with McPhedran show that the tuberculin reaction will often aid in determining whether a recognizable lesion is potentially progressive or healed. An active tuberculin reaction in a child with a tuberculous lesion recognizable by roentgenologic examination he regards as presumptive evidence that the lesion has not healed.

A positive tuberculin test is assumed by Chadwick to indicate the presence of living tubercle bacilli.

In the light, however, of the available evidence that tuberculous infections die out, Harrington and Myers have come to realize the impropriety of believing that all persons reacting negatively to tuberculin have never been infected.

Many employ the scratch (Pirquet) test, although the intracutaneous (Mantoux) test is recognized as the most accurate, especially for quantitative determinations.

The strength of the tuberculin employed by various authorities varies widely from pure tuberculin to the ten-billionth of a gram employed by the writer.

Many of the studies on tuberculin sensitiveness in both laboratory animals and human beings have been qualitative, with no variation in the amount of tuberculin employed.

A number of investigators use different amounts, which, however, do not vary one hundred per cent, and all being what they regard as excessive or large. Some estimate the degree of hypersensitiveness from the intensity of the reaction.

White and Graham, Holmes, Hamman, Frisch and Eiselsberg, and the writer—all but the first using the intracutaneous test—are apparently the only investigators who have reported what may be regarded as real quantitative studies. In his study on tuberculin hypersensitiveness, published in 1917, the writer injected 0.0000001, 0.000001, and 0.00001 mg. simultaneously and, if no reaction occurred, later injected simultaneously the three next highest strengths, and so on, until either a reaction was obtained or 10 mgs. were injected—an amount 100,000,000 times that first injected. One-fifth of the patients so tested reacted to the minute dose of 0.0000001 mg.

In a more recent analysis of 499 intracutaneous tests on 59 tuberculous patients, reported by the writer to the American Medical Associa-

* Read before the Section on Pediatrics of the Medical Society of the State of Pennsylvania, Erie Session, October 1, 1929.

tion in 1921, fifty of the patients (84.7 per cent) reacted to 0.00001 mg. or less. Excessive local reactions were produced by 0.0000001 mg. in one case, by 0.000001 mg. in five cases, and by 0.00001 mg. in four cases. There were no signs of a general systemic reaction, including rise of temperature, except in a few patients, who were in the far-advanced stage of the disease.

Eberson uniformly obtained constitutional reaction in 90 per cent of his patients who reacted to an intracutaneous test of 0.05 c.c., quite violent local reactions in most of them, and focal reactions in every patient who had some evident lymph-node involvement and in those with bone tuberculosis.

A skin test is regarded by White and Van Norman as equivalent to a therapeutic dose of tuberculin. This view receives some support since tuberculin is being administered therapeutically both intracutaneously and by inunction.

Activation of the patient's tubercle by the test doses of tuberculin ordinarily employed may result in great harm, inasmuch as intracutaneous injections of one ten-billionth to one hundred-thousandth of these amounts have produced severe local and even general reactions.

To avoid this danger, as well as to measure accurately the degree of hypersensitiveness present and to make quantitative comparisons, it is necessary to begin by injecting less than the amount that will produce a reaction. This is manifestly impossible with the amounts commonly used, inasmuch as a large percentage of the patients reacting to the smallest amount that most investigators employ would probably also react to a ten-thousandth of that amount.

Old tuberculin (O.T.) is the form of tuberculin used for diagnosis by nearly every one, with the exception of Lawrason Brown, Hamman, and the writer. The first used bouillon filtrate (B.F.) and bacillen emulsion (B.E.) in addition to O.T., although believing a toxin in solution more apt to cause reaction than an emulsion. The prevailing opinion, expressed by White and Graham, is that a solution of tuberculin is necessary to render absorption of the poison as easy as possible and that suspensions of bacilli, containing, as they do, clumps with the poison still in the bacillary body, are not permissible, as they do not permit of ready absorption by the lymphatics which is necessary. Fischel regards the suspensions of mechanically crushed bacilli as unsuitable for diagnosis, while Krause states that a protein in solution is the best preparation for sensitization.

Whether or not these opinions are correct in regard to the cutaneous test, it nevertheless is a fact that tuberculin residue (T.R.), consisting of bacillary bodies, has produced reactions when injected intracutaneously and in doses as small as 0.0000001 mg. In the writer's investigations reported in 1917, T.R. was used in all but two of the patients studied, and in his work reported in 1921 it was injected 357 times in 54 patients.

An interesting observation, that may have some bearing on this question, is that when injected intracutaneously the writer's pathogen-selective vaccine nearly always produces a local reaction, which it seldom does when scratched into the skin.

Hamman states, moreover, that the protein of tuberculin produces quantitatively always an identical reaction, whether the culture fluid be used, the bacilli, or the pure protein extracted from the bacilli.

The writer for many years has been testing patients simultaneously with O.T. and T.R., with the thought that a patient's hypersensitiveness to the endotoxins, which probably are in greater amount in T.R., may differ from his hypersensitiveness to the exotoxins, which probably are present in greater amount in O.T. The majority of the patients reacted to the same dose of each. Some reacted to O.T. and not to T.R., and some reacted to T.R. and not to O.T. This observation raises the question whether a patient who reacts negatively to O.T. can properly be said not to be hypersensitive to tuberculin, until he has also been tested with T.R. Some patients reacted to a smaller dose of O.T. than of T.R., and others to a smaller dose of T.R. than of O.T. Dienes recently has shown that between different tuberculin preparations not only quantitative but also qualitative differences are present with respect to the tuberculin effect.

The writer's present method of making the tuberculin test is to inject intracutaneously at the same time O.T. in the right forearm and T.R. in the left forearm in doses of 0.000001, 0.00001, and 0.0001 mg. If these produce no reaction, doses of 0.001, 0.01, and 0.1 mg. are similarly injected at the same time several days later, and if no reaction then occurs, doses of 1 mg. and 10 mgs. are subsequently injected. The injections are given in a diagonal line, with the smaller dose distal to the larger, and the control distal to them all.

Treatment of Tuberculosis in Infancy and Childhood

In addition to removing the child from infection, treatment consists in building up general resistance by means of fresh air, proper food, proper clothing, proper bathing, proper exercise,

sufficient sleep, and mental and physical rest; the avoidance of and protection from respiratory and other infections; the removal of focal infection—by means of surgery where feasible and also by raising the patient's lowered resistance to the infecting organisms through the proper administration of a properly prepared pathogen-selective vaccine, the employment of indicated medication, and, in suitable cases, the proper administration of tuberculin in dosage appropriate to the individual child.

Tuberculin Therapy

Tuberculin administered to a tuberculous individual causes an allergic reaction, with the production in the affected region of hyperemia and of serous and cellular exudation. In proper dosage, properly spaced, tuberculin promotes the formation of fibrous tissue around the focus of disease, which operates toward preventing the extension and multiplication of the focus and toward impeding the escape of the bacilli or poisons contained therein into the surrounding tissues and thence into the system. It also possibly may stimulate the production of antibodies.

Too large an amount, however, may so activate the tubercle as to promote its growth and spread the discharge into the body, of the bacterial and other poisons it contains. In the presence of marked activity at a focus, the process may be overstimulated by even a minute dose of tuberculin.

Therein lies the great danger in tuberculin therapy. It was the harm done by the large doses during the period immediately following Koch's discovery that led to the general abandonment for many years of this form of treatment. During the second period of its popularity, ten to twenty-five years ago, when tuberculin was given in nearly every sanatorium and glowing reports of the good results obtained were read at innumerable meetings and published in all the journals, much smaller initial doses were given. Yet even these so-called small doses that were being advocated by Lawrason Brown, W. C. White, Hamman, Wolman, and a host of others, were then regarded as excessive by the writer who sixteen years ago warned that it was not safe to give all patients the same initial dose, as was the rule, unless one began with 0.0000001 mg. or 0.000001 mg. It is possible, however, that in some of the newer forms of tuberculin the active agent is greatly attenuated and also that in the cutaneous methods of administration recently employed, only a minute amount is absorbed.

In 1920, the writer pointed out that in view of the great variations in hypersensitiveness—one patient reacting to a dose a hundred million times that which produces reaction in another, it would be more accurate and timesaving to determine the appropriate initial dose for the individual patient than to give all the same initial dose. He suggested that the initial therapeutic dose be the smallest amount that produces a reaction when injected intracutaneously. This method is now being used by Kolmer, White, Graham, and Van Norman and von Frisch and von Eiselsberg apply the same principle in their methods. The writer's practice for the past nine years has been to test each patient intracutaneously with both O.T. and T.R. and to give as the initial doses the minimal amounts of each that produce reactions. The safety of this method is attested by the fact that in the writer's hands doses so determined have never produced an unfavorable reaction.

The general disfavor into which tuberculin therapy has fallen during the past ten years is doubtless a result of the harm done by the large initial doses most physicians have persisted in giving all their patients.

Dosage subsequent to the initial dose should be based upon the general, focal, and local reactions to the immediately preceding dose. Avoidance of danger depends upon the ability of the physician to elicit and recognize slight symptoms. Ninety-eight separate subjective and objective symptoms of favorable and unfavorable tuberculin reactions occurring in seventy-one of his patients, were tabulated by the writer fifteen years ago, to which were added twenty-eight additional symptoms that had been described by others but not observed by him. In young children, however, one can seldom rely upon subjective symptoms.

The appropriate therapeutic dose in the writer's experience is one that produces a favorable reaction, as evidenced by a feeling of well-being or exhilaration, increased appetite and strength, an amelioration of the symptoms, the fall to normal of a previously elevated temperature or a reduction in the extent of its daily fluctuation. Such a dose should be repeated until it no longer produces a favorable reaction, whereupon it should be increased. It is also advisable to repeat a dose that produces a very slight unfavorable reaction which lasts but a few hours, or at most a day, and is often followed by an amelioration of the symptoms or of the general condition.

A dose is too large, in the writer's opinion, if it causes symptoms of an unfavorable reaction, such as increase of symptoms, elevation of temperature, malaise, anorexia, pains, loss of weight,

and definite and prolonged pain and inflammation at the site of injection. Such a dose should be reduced by a half, a tenth, a hundredth, or a thousandth, depending upon the intensity and duration of the reaction it produced.

A dose that has no effect of any kind is probably too small and should be increased until it causes either a favorable or an unfavorable reaction.

A fairly safe rate of increase is about fifty per cent of the preceding dose, according to the following schema: 1, 1.5, 2, 3, 5, 7, 10, 15, 20, 30, etc., although a more rapid increase is sometimes justifiable. It is the writer's practice to suspend treatment when the dose has reached 10 mgs., although others continue until 1 gram or 10 grams or more are given.

When intracutaneous tests, made at intervals, show that the minimal reacting dose is in excess of the last therapeutic dose one may immediately give this minimal reacting dose. The writer in this way has increased from 0.001 mg. to 0.1 mg. in four doses and from 0.00001 mg. to 0.001 mg. in the course of a few days without producing any unfavorable reaction.

The interval between doses depends upon the reaction and may be three, five, seven, or ten days, or even longer.

Cases Suitable for Tuberculin Therapy

Children with latent tuberculosis, with so-called hilum tuberculosis, with minimal pulmonary lesion, with glandular tuberculosis, and with many forms of bone tuberculosis, are usually fit subjects for tuberculin treatment administered in the manner outlined. Some in the moderately advanced stage of pulmonary tuberculosis are also suitable for most cautious administration in expert hands. In far-advanced lesions of any sort, in miliary or pneumonic processes, and when severe toxemia is present, tuberculin is contraindicated.

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ABSTRACT OF DISCUSSION

Robert K. Rewalt, M.D. (Williamsport, Pa.): I should like to ask Dr. Solis-Cohen where he obtained the tuberculin necessary for use in the intracutaneous test. We have had much difficulty in our locality in getting the material with which to work. We have been using tuberculin made by the laboratories of the New York Board of Health, but we are informed by them that they will confine all their products to the physicians of New York City.

Dr. Solis-Cohen (in closing): Mulford supplies both O.T. and T.R. in 8 c.c. vials of which 2 minims contain 0.0001, 0.001, 0.01, 0.1, and 1.0 mg.; and 0.1 and 1.0 gram respectively.

ACUTE EYE INJURIES*

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Observations on the more common types of acute eye injuries are here recorded with special reference to treatment.

Lacerations

Lacerations of the eyelids are numerous and varied, each presenting its own problem. In the majority of cases, prompt primary union with good cosmetic result is obtainable without the use of sutures because of the great elasticity of the skin of the eyelids. Infection can be prevented by the daily application of a one per cent solution of nitrate of silver, and in the absence of infection the cicatrix may become invisible in a short time. In large through and through lacerations which involve the margin of the lid, the use of sutures is indicated if much deformity is to be avoided. As many sutures as are necessary to approximate the torn edges of the tarsus and of the skin are used. Another very common injury is avulsion of the lower lid from the inner canthus and the side of the nose. If not fully corrected at the time of repair operation, these patients carry a sagging lower lid which is a conspicuous deformity. On account of bony obstructions at the site of this injury, only a curved needle small enough to swing through an arc of about one centimeter can be manipulated to get bite deep enough to hold the upper end of this laceration firmly in position until union takes place. As many more sutures as seem necessary should be used.

Lacerations and perforating wounds of the cornea and sclera also unite without sutures almost perfectly in most cases. Large irregular and triangular perforating wounds, in which sutures with their additional trauma and encouragement of infection would promise nothing but harm, heal promptly without much deformity, and with only moderate astigmatism. If the cornea is involved in these lacerations, further interference by sutures, with flow of blood and thus with flow of lymph required for repair of the cornea, seems bad practice after one has seen how well recovery occurs with more conservative treatment. If prolapse of the iris is present, an iridectomy is done at once, without attempt at replacement of the prolapse. Eserin salicylate (¼ per cent) in a solution of cyanid of mercury (1:3000) is instilled several times before operation, in order to contract the pupil and thus prevent incarceration of the pillars of the colo-

* Read before the Section on Eye, Ear, Nose, and Throat Diseases of the Medical Society of the State of Pennsylvania, Erie Session, October 2, 1929.

boma after iridectomy. A dressing is applied to both eyes for twenty-four hours. At first change of dressing the anterior chamber should be restored. Then atropin sulphate (1 per cent) in a solution of mercury cyanid (1:3000) is instilled daily, dressing the operated eye only, for several days. Large penetrating wounds at right angles to the fibers of the anterior sclera, which gape considerably, must be sutured if there is any hope of saving the eyeball. Many of these injuries, however, involve the ciliary body and enucleation at once may be indicated to remove the menace of sympathetic ophthalmia.

At first signs of undue inflammation or infection, resort is made to nonspecific protein therapy. Results with antidiphtheritic serum, according to the method of Key, have been so satisfactory that it is still employed. Initial injections of 5000 units are given, followed by daily injections of 3000 units until inflammation has shown marked improvement. In all penetrating wounds, prophylactic injection of antitetanic serum is given at once, with the hope of obtaining some protein therapy effect in addition to tetanus prophylaxis.

Ruptures

Ruptures of the cornea are usually due to direct force and may be of any size or shape. If the iris is prolapsed, an iridectomy should be performed. Ruptures of the cornea have all the characteristics of perforating wounds, but offer a more grave prognosis since the greater pressure by a blunt object causes serious contusion of the whole eyeball.

Indirect ruptures of the sclera occur most often above or nasally and are near the cornea and concentric with it. On account of the great indirect force necessary to produce it, the rupture has an explosive effect which may expel some of the contents of the eyeball, either through or under the conjunctiva. If the lens is found under an intact conjunctiva, it should not be removed until the wound in the sclera has healed. A severely traumatized ciliary body gives a very grave prognosis as early enucleation may be indicated to prevent sympathetic ophthalmia. Direct ruptures of the sclera may be produced at different locations as they occur at the site of injury. The size of the rupture and the amount of contusion of the eye determine the prognosis. Very large ruptures in which gaping is not extreme will unite surprisingly well without sutures and often with very good vision.

Contusions without rupture may also be very serious as they cause a large variety of injuries. They demand thorough examination always. Even a blow by a tennis ball may have disastrous results if neglected. The treatment varies greatly in accordance with the pathology found.

Foreign Bodies

Foreign bodies may at any time cause serious consequences, although they appear to be simple and commonplace conditions. Foreign bodies in the conjunctiva as a rule offer no difficulty. Occasionally they are not readily seen, however, and should be searched for diligently. The eyelids should be everted always. I have known a badly ulcerated cornea to heal promptly upon removal of a large foreign body from the tarsal conjunctiva of the upper lid after the patient had been treated for several weeks for corneal ulcer. Eversion of the lid would have prevented much discomfort and some impairment of vision. The transitional conjunctiva must not be overlooked. A splinter of wood may be imbedded in the conjunctiva of the fornix with only a fine tip projecting. If the foreign body is under the bulbar conjunctiva it may be necessary to grasp the conjunctiva over the foreign body with forceps and excise a small portion of the conjunctiva with the foreign body. No sutures are used. Black stains under the conjunctiva from powder burns often cannot be removed because they penetrate the sclera.

Foreign bodies in the cornea should have careful attention and thorough after care, since much impairment or even loss of vision may result if infection occurs. The cornea should be anesthetized always by four or five instillations of cocain hydrochlorid (4 per cent) in solution of mercury cyanid (1:3000) at one-minute intervals. A foreign body superficially attached to the cornea may be brushed off gently with a cotton pledget saturated with mercury cyanid solution (1:3000). If this method does not succeed, the foreign body may be lifted out gently with a spud. Deeply imbedded foreign bodies should be removed with a foreign-body needle. If the foreign body crumbles into pieces and several attempts at removal are necessary, the needle should be manipulated away from the center of the cornea as much as possible rather than toward the center in order to avoid unnecessary impairment of vision by the resulting scar. At this time, also, all the remaining stain should be curetted away if it can be done without excessive injury to the cornea. If the stained tissue is firmly adherent it is advisable to allow some to remain until the following day when it may be removed easily. If the foreign body enters the cornea obliquely it may be partly or completely under a shelf of corneal tissue. A speculum should then be used and the eye fixed

with fixation forceps. The end of the foreign body is then grasped with a foreign-body forceps, or it is removed with a needle or an electromagnet if magnetic. If completely under a shelf of corneal tissue, a cataract knife is used to expose it, and forceps, needle, or electromagnet then completes the extraction. Care is necessary to avoid forcing the foreign body into the anterior chamber. For foreign bodies in the cornea and partly in the anterior chamber, it may be necessary to make a keratome incision and support the foreign body from behind with the keratome until extraction is completed.

Patients with superficial foreign bodies and without much disturbance of corneal epithelium are given a mercury bichlorid ointment (1 : 3000) three times a day and discharged the following day if no ulcer is present. If the corneal epithelium is broken and the stroma injured, atropin sulphate (1 per cent) in a mercury cyanid solution (1 : 3000) is instilled after the operation. Mercury bichlorid ointment (1 : 3000) is applied to the conjunctiva, to the cilia, and to the skin of the lids, and a dressing is applied with adhesive. The eye is dressed daily with this ointment until the epithelium is restored. Foul or infected corneal ulcers are cauterized with 85 per cent phenol on a thin, tightly-wrapped, cotton applicator. The cornea is anesthetized with cocain solution. The amount of phenol to be used is regulated by pressing the applicator on a finger nail. Excess phenol is removed on dry cotton until pressure of the applicator on a finger nail leaves only moisture on the nail. Then the applicator is lightly applied to all parts of the ulcer. Atropin sulphate (1 per cent) in a solution of cyanid of mercury (1 : 3000) applied three times a day and hot compresses applied continually should now control the ulcer.

Intra-Ocular Foreign Bodies

Intra-ocular foreign bodies require some study to determine the proper method of removal. When an intra-ocular foreign body has been localized by the x-ray, it should be removed unless it is nonmagnetic and in such a position as to require prohibitive manipulation. It is then allowed to remain, hoping that it will be well tolerated. Attempts at removal through the entrance wound are not made unless the foreign body is visible at the entrance wound or has been localized by the x-ray, and found to be in a favorable position. X-ray examination should be made in all perforating wounds including those in which a visible foreign body has been removed, as a second body may be present. Foreign bodies in the anterior chamber are removed at once. This also applies to those superficially imbedded in the lens. Foreign bodies deeply imbedded in the lens may be well tolerated or they may cause sudden violent iridocyclitis or general uveitis even after an elapse of several months. Removal is therefore indicated if the foreign body is magnetic, with or without expression of the lens cortex at the time of operation, depending on the circumstances in a particular case. If on the iris, a small iridectomy including the foreign body may be necessary. If in the vitreous, and the lens is opaque, the foreign body is removed by the anterior route, when possible, to avoid further injury to the retina and choroid. If the lens remains clear, a semilunar incision of appropriate size through the sclera is made as near as possible to the foreign body. The tip of the magnet is then inserted and placed in close proximity to the foreign body before applying the current. For all magnetic foreign bodies the Heckel hand magnet with removable core is employed, the entire core being removed and sterilized before operation.

Gunpowder and dynamite explosions may drive innumerable foreign bodies into the face and practically all the tissues of the eye. If much powder, coal, etc., is blown into the skin of the face, operation must be done with general anesthesia. Larger foreign bodies are removed. The areas involved are then scrubbed with sapolio or bon ami on a gauze sponge until the black stains disappear. Small infected areas which may appear are brushed daily wtih a one per cent silver nitrate solution.

A patient with numerous nonmagnetic foreign bodies, such as coal, scattered about the exterior and interior of both eyes after a dynamite explosion presents many problems, the first of which should be the preservation of some vision. In such badly injured eyes those foreign bodies that can be reached easily may be removed. The rest should not be disturbed as attempts to remove them would doom the eyes to destruction. With more conservative treatment useful vision is sometimes retained for years. Antitetanic serum, one per cent atropin solution in mercury cyanid (1 : 3000), and continuous hot boric acid compresses should be ordered and nonspecific protein therapy instituted as soon as indications for it arise.

Burns

Appearance of burns of the eyeball may be deceptive if they are seen soon after the accident. Heat burns may not be so severe as they at first appear. A broad, white, superficial char of the cornea may vanish quickly. Conversely, acid and alkali burns may not appear so severe at first inspection yet the caustic effect may eventu-

ally perforate the cornea or sclera. As a rule, caustic effect is spent by the time the patient is seen, and neutralizing chemicals are not indicated. The eye is irrigated thoroughly with normal salt solution and foreign bodies are removed. Atropin sulphate (1 per cent) solution followed by sterile olive oil three times a day is then applied. As heat hastens repair, hot compresses are used continually in all burns of the eyeball, and in severe burns of the cornea, they are applied day and night. In large burns of the conjunctiva, symblepharon must be prevented if possible. The eyelids should be retracted several times a day to prevent union between the eyelid and eyeball. One per cent atropin sulphate solution is instilled three times a day and followed by sterile olive oil. To burns of the skin of the lids, mercury bichlorid (1:3000) in cold cream is applied. If edema becomes intense and causes entropion, cold compresses are used until the entropion is relieved, then hot compresses are resumed. Contraction of cicatricial tissue resulting from deep burns of the eyelids may cause ectropion to such an extent as to threaten the cornea with destruction by evaporation. Then blepharoplasty must be done to restore function of the lid and protect the cornea.

To hasten resolution of opacities of the cornea following injuries, a lymphagogue should be prescribed. For this purpose, dionin is used beginning with five grains in two drams of cyanid of mercury (1:3000) and increasing the dosage one grain with each prescription, up to ten grains. One drop should be used in the affected eye twice a day. As patients will become tolerant to it, omitting dionin about one day a week increases its effectiveness. Many persons are sensitive to dionin and will be unable to use it at all if intense edema of the lids and the conjunctiva appears at the onset of treatment and persists. To avoid unnecessary misunderstanding and alarm at this reaction, it is advisable to warn all patients of this possibility.

Attention should be called to the importance of early examination of the eyes in all head injuries. Too many patients apply for treatment subsequently for lesions which should have been discovered soon after the injury. Choke disk, injury to the optic nerve, or to the intracranial nerves which supply the extra-ocular muscles, detachment of the retina, intra-ocular hemorrhage, traumatic cataract, all should be diagnosed early if treatment is to be effective.

Summary

Repeated application of a strong antiseptic during the time required for cocainization must be more effective than merely flushing the eye with an antiseptic. Solution of mercury cyanid (1:3000) is used as a vehicle for all medication dropped into the eye, thus assuring in addition to sterile solutions, thorough antisepsis before operation. General adoption of this technic will prevent many infections.

It is to be hoped that the types of protein therapy in use today are as effective as antidiphtheritic serum. Hypopyon will disappear overnight. If treatment is stopped a little too soon and hypopyon reappears, it will again disappear promptly on resumption of the treatment. As a dosage of three thousand units can be continued over a longer time than the larger doses and keeps the process so completely under control while nature prepares repair measures, it is still preferred.

Sutures should be used only when necessary for coaptation of wound edges in large gaping wounds of the eyeball or adnexa.

Only hot compresses are used in the treatment of burns or injuries of the cornea since heat hastens and cold retards all repair processes.

A thorough examination of the eyes should be made early in all patients with head injuries.

In treatment of eye injuries the more conservative procedures as a rule promise best results.

Jenkins Arcade.

ABSTRACT OF DISCUSSION

Edward B. Heckel, M.D. (Pittsburgh, Pa.): Some injuries are almost impossible to see, but by using the modern Cameron lamp and retro-illumination, we may find a small foreign body that we might have been unable to see by ordinary oblique illumination, or even by the use of the loupe.

To remove a foreign body in the cornea is simple, but unfortunately if neglected it is very serious. I have under observation a man who got a foreign body in the cornea, neglected it for a few days, with the result that there was extensive destruction of the cornea. A foreign body should be treated while it is a simple matter. The eye should be sterilized. For that purpose we use a solution of mercury cyanid (1:3000), before the foreign body is removed. The best form of instrument is a Bowman's needle which has a sharp point. Some object to it and say it may inflict injury, but if a man is not skilled enough to use a Bowman's needle he should not pretend to practice ophthalmology. All foreign bodies are easily removed if they are hard, but sometimes a foreign body in the cornea punctures the corneal epithelium and Bowman's membrane, and may lead to infection. After these foreign bodies are removed, there should be an instillation of atropin, not only to paralyze the pupil and the ciliary muscle, but for its beneficial effect on the circulation of the cornea. The patient may be a little inconvenienced, but his comfort otherwise is greater than the inconvenience. At least one instillation should be used.

Frequently a hot foreign body burns itself into the cornea and we find a perfect ring that is difficult to remove. Perhaps some one has seen the patient and

removed the foreign body, but by the use of oblique light we find this ringlike formation, the remnant of the foreign body. There is only one way to get at it, and that is with a sharp-pointed Bowman's needle. The ring can be taken out entirely, and then the wound should be curetted and washed with cyanid of mercury.

We anesthetize the cornea with cocain, from which there is no danger if it is used properly. Then the wound is curetted; atropin, instilled; the patient seen every twenty-four hours and, for three or four days, provided with dark glasses.

In the case of intra-ocular foreign bodies, the patient gets routinely 1500 units of tetanus antitoxin when he enters the hospital. After that the wound is not disturbed. An accurate history is taken: what the patient was doing; the position he was in; and whether the foreign body is metal. Then an x-ray is taken and the eye is not touched until we know if a foreign body is there and exactly where it is. If it is magnetic, we use a magnet. It used to be common practice to speak of the magnet as a diagnostic instrument, which should be mentioned only to be condemned. I have had a case recently in which the foreign body was a piece of brass about so large as a small grain of wheat. Iron or steel is tolerated for a long time without exciting any reaction, but with brass there is a definite reaction—an angry looking eye and vitreous changes that mean enucleation.

A word about enucleation. When we first see many of these we might say the eye is lost and should come out right away. This is a terrible experience to the patient and it is always wise to go gently in your prognosis. The patient should be told that his eye is seriously injured and the chances are the vision is destroyed, but you will do all you can to save the eye. Within a few days perhaps the patient himself will say that the eye might as well be removed.

Burns can be divided into chemical and thermic burns. In chemical burns, such as from lime, you will find certain textbooks recommend neutralizing the chemical, but I think that is a waste of time. If you flush the eye thoroughly with normal saline you can get rid of the chemical that is left, but the damage is done.

As to the prognosis of burns due to hot metal, I had two valuable experiences early in my career. One, a young woman who had burned her eye with a curling iron. The corneal epithelium was seared and a white coat was over the entire cornea. I gave her a solution of atropin and a little olive oil, but thought the eye was lost. Sterile olive oil applied at intervals of one hour will allay inflammation and give the patient some comfort. She came back after using hot applications, and the cornea was perfectly clear. Her progress was good. A short time after that a man with a hot-metal splash burn of the cornea that did not look bad at all called on me. I told him it would not amount to much, but, unfortunately, he lost the eye. The hot metal had coagulated the albuminous tissue so that a slough resulted.

We sometimes see metal splash burns in which there are changes in the culdesac, but on superficial inspection reveal nothing. Sometimes on careful inspection a little piece of metal will come out, which produces destruction of the conjunctival epithelium and changes in the tissue of the conjunctiva, and later on there may be a symblepharon. We sterilize these wounds and keep them clean, and once a day, especially the culdesac, we brush over with a solution of silver nitrate, one grain to the ounce. I am sure that it reduces the amount of symblepharon that results. If the symblepharon is fully formed we do not operate on them soon. In fact, it is sometimes put off for months while the patient stretches the resulting symblepharon, and the results from this continual stretching are gratifying. Teach the patient to pull down the lid and look up until it hurts a little. If this is done three or four times a day, the tissues will stretch and very often you will be deprived of an operation.

J. CRAIG MCALLISTER, M.D. (Ridgway, Pa.): Two brothers were fishing and one hooked the other in the eye, the hook going through the cornea, the barb being entirely in the anterior chamber. The problem was how to remove the hook. The thought came to me that I could push the hook on and bring the barb outside of the cornea, cut it in two, and take it out backwards, and it worked very nicely. Perhaps this procedure may be of service to you.

A woman was riding in a car which left the road and turned upside down, pinning her underneath the batteries, and the battery fluid ran down into both eyes. When she came to me no first aid had been rendered. The accident happened fifteen miles away and there was delay in getting her into the hospital. Both corneas were glazed and the bulbar conjunctiva, damaged. The eyes were immediately washed and heat, atropin, and oil applied. In three or four days, the ocular conjunctiva had been destroyed leaving the bare sclera. Within a few days there was a necrotic area around the corneas and panophthalmitis developed and both eyes had to be eviscerated. I was somewhat optimistic about the result at first, and this blow came as a most undesirable termination of a case that did not seem serious. A careful study of Wurdemann's book, *Eye Injuries,* led me to believe that in the destruction of the ocular conjunctiva there was destruction of the circulation to the cornea. The cornea has no blood circulation, but the nutrition was evidently interfered with and necrosis occurred with the destruction of both eyeballs. In a similar case, a favorable prognosis should not be given.

LEIGHTON F. APPLEMAN, M.D. (Philadelphia, Pa.): I believe the milder injuries of the eye should be outlined at the first treatment by means of one of the commonly employed staining solutions. I have seen many injured eyes and, recently, a patient who was treated for about three weeks for an inflamed eye because it was not recognized that there had been an injury to the cornea. Staining with fluorescein showed superficial denudation of the cornea over a considerable area which healed promptly after it was recognized and other treatment instituted. In superficial injuries to the eye, and in abrasions, we use holocain which is antiseptic in one per cent solution as well as anesthetic, and, therefore, allows healing to go on more promptly.

Dr. Heckel mentioned the use of atropin after all injuries to the eye caused by a foreign body. It is rather severe on a man who is earning his daily bread to be incapacitated in this way, unless the cornea has been deeply traumatized. If there are symptoms of infection, or if you know from the nature of the injury that infectious material may have been carried in, this course is a precautionary measure.

Dr. Schlegel in speaking of rupture of the cornea failed to mention the use of a conjunctival flap, one of the most important procedures to prevent subsequent infection and at the same time to exert a certain amount of pressure which may be supplemented by a slight compress bandage over the closed lid which will more thoroughly permit the edges of the wound to approximate and heal without deformity.

As to the prognoses in many of these injuries, I have seen many of them in my service at the Wills Hospital in which the cornea had been ruptured and the wound extended into the sclera to a point at which it was problematical as to the actual involvement of the ciliary body. Careful judgment is to be exercised in such cases, whether to advise enucleation at once, or to temporize by throwing a flap over the wound in an endeavor to save the globe. In injuries involving the cornea, we hesitate to advise enucleation of an eye unless the ciliary body is also involved, under which circumstances, we are saving the patient time, and much suffering which follows an unsuccessful attempt to save the eyeball. In those cases in which the ciliary body is not involved, the use of the conjunctival flap is the method of choice, and the prognosis is good for the retention of the globe.

John B. McMurray, M.D. (Washington, Pa.): Just a word about how comfortable we may feel about a negative x-ray report in penetrating wounds from coal or slate. One of my patients had a penetrating wound of the cornea. The anterior chamber was full of blood. An x-ray, made at once to determine if there was a foreign body in the eye, was negative. In time the anterior chamber cleared and we could readily see a small piece of coal lying on the lens almost in the center of the pupil. We were interested to know why the x-ray would not show a piece of coal 1 by 1½ mm., but repeated x-ray examinations did not show the foreign body.

It has been my practice recently to outline the area of these bodies with fluorescein, dry with blotting paper, and then sterilize with carbolic acid on a sharpened wooden applicator.

G. William Schlindwein, M.D. (Erie, Pa.): I have seen small points of chestnut burrs in the conjunctiva of the upper lid. They are rather difficult to recognize, and their presence is manifested only by the effect on the cornea. In the fall, if there is a history of some one having a foreign body in the eye after chestnutting, do not forget the possibility of these small points of the burrs being buried in the conjunctiva. In one case, extensive ulceration of the cornea followed the injury.

John V. Foster, M.D. (State College, Pa.): I should like to know more about milk injections. In three months, I have seen three cases of eye injury, in one of which the small finger could be inserted in the wound, and in the others, the third finger. One, a teacher, was struck by something falling from a tree and it took seven stitches to close the wound in the upper lid. The iris protruded, and the third finger could be inserted in the eyeball. Not wishing to handle the case, I took the patient to Tyrone, using ice on the eye all the way. After the wound was closed, milk injections were used. The other two cases were treated in the same manner, continuing the milk injections for eight weeks. There was no pain, the wounds healed, and the iris fluid returned in all three.

Harvey E. Thorpe, M.D. (Pittsburgh, Pa.): As oculists, we are interested in correct diagnosis. Dr. Heckel pointed out an interesting way of showing the presence of foreign bodies with oblique illumination and the loupe. The routine way in which we follow diagnosis and treatment is as follows: The patient's vision is taken and the cornea is inspected with a binocular loupe and oblique illumination. The cornea is examined with the slit-lamp microscope which will reveal the most minute body. If necessary we use fluorescein. We then instil four per cent cocain and one-fiftieth of one-per-cent scopolamin solution. After three instillations of cocain at five-minute intervals, we curet the foreign body away. It is important to remove the foreign material thoroughly; otherwise it takes the patient a week or ten days to recover. If the foreign material is removed thoroughly at the first treatment, the cornea will heal in two or three days. Subsequently we examine the cornea with the slit lamp (this examination takes no more than a minute) to see if all the foreign material has been removed. We instil mercurochrome, (2-per-cent aqueous solution) and make sure that the tear duct is patent by irrigating it with a lacrimal syringe. In the case of coal miners, this is especially important for many a patient has had a chronic ulcer because of a closed tear duct. Subsequently we paint the everted lid with a two-per-cent solution of silver nitrate and irrigate the sac with a normal saline solution; then we apply to the conjunctival sac a 1:3000 bichlorid salve, and seal the lids with occlusive gauze. The recovery of that patient may be expected within forty-eight hours. We emphasize the importance of the occlusive dressings.

The slit-lamp microscope has been a great help in indicating the depth of the corneal foreign body, and whether it extends into the anterior chamber. Also it shows if there are minute perforations of the cornea, the previous history of the cornea, and whether it has been affected by syphilis or by an old parenchymatous keratitis. It helps us to distinguish between injury and disease.

From the standpoint of foreign protein therapy we have used both antitetanus serum, diphtheria serum, and milk. In my experience, milk is to be preferred and this is the technic we follow: In all perforating eye injuries, in all eye injuries that seem to be infected, or if there is ulceration, ordinary milk is boiled for four minutes after it comes to the boil, and ten c.c. of the cooled milk is injected into the gluteal muscle. The eye is examined the next day, and within forty-eight hours the treatment may be repeated. There is rarely an anaphylactic reaction from milk. Of course some cases come to grief despite numerous milk injections. We have observed anaphylaxis from the injection of antidiphtheritic serum, but that can be combated by the injection of adrenalin.

Dr. Schlegel (in closing): Dr. Appleman mentioned that a wound may be in the ciliary region and not injure the ciliary body. It is surprising how much injury can occur to the outer coats of the eyeball without seriously injuring the tissues in close proximity, such as the lens and the ciliary body. These cases often at first appear to be quite hopeless. By the following day improvement is noted and it is evident that the ciliary body has escaped serious injury. It is, therefore, wise to allow sufficient time to determine if such an injury has occurred.

Every man starting out in business will have to go over a hard road and find out its turnings for himself; but, he need not go over his road in the dark if he can take with him the light of the other men's experience. —*John Wanamaker.* There is no better place to become acquainted with the other man's experience than at the meetings of the county and state medical societies. Have you marked the days—October 6 to 9, 1930—on your calendar so that you will have a constant reminder of the eightieth Annual Session at Johnstown?

Case Reports*

PROSTATIC CALCULI

MAXWELL J. LICK, M.D.
ERIE, PA.

This disease has been regarded as rare. Leguen in 1895, said: "There are no calculi of the prostate, but only of the prostatic urethra." Glaesal, however, in his historical review, in 1914, found a case which had been reported in the 16th century. Judd and Crenshaw reported only 20 cases out of 3180 prostatic patients seen at the Mayo Clinic, from January, 1910, to July, 1918. Kretschmer in 1918, who had observed 76 of his own cases, found 173 cases in the literature. Thomas and Robert, in 1927, with their own cases increased the number to 305.

Thus, a condition called rare, becomes relatively more common because of its recognition. Increasing knowledge and interest will undoubtedly bring to light many more instances.

True prostatic calculi are stones formed within the substance of the gland itself. Their nuclei consist of normal prostatic secretion (corpora amylacea), described first in 1866 by Sir Henry Thompson. They are overlaid by deposits of calcium phosphate and carbonate.

False prostatic calculi are those formed in the kidneys, bladder, or diverticulæ and lodged in the prostatic region. Their nuclei are of urates. Our discussion is limited to true prostatic stones.

The etiology of all calculi is somewhat hypothetical. Since corpora amylacea forms the nucleus, the calculi must be formed in the acini, or ducts of the gland. They are probably secondary to inflammation, which plays an important part. Gonorrheal infection does not seem to be a definite factor. These bodies, corpora amylacea, may attain such a size as to act as a foreign body around which are deposited the earthly salts to form solitary or multiple stones.

The symptoms and signs are usually those of prostatitis, in the fourth or fifth decade, and are not characteristic. They are frequently unrecognized. We enumerate the symptoms and signs in the order of importance as observed in the case reported. (a) Uneasiness or pain in the perineum. (b) Frequency, burning, and dysuria. (c) Pyuria. (d) Restriction of stream, and poor control. (e) Prostate slightly tender to palpation.

Hematuria, loss of sexual function, and other symptoms may occur, dependent upon the disturbances of physiology and anatomy of the parts involved.

Diagnosis

Calculi should be suspected in all cases of prostatitis with marked, stationary symptoms, under ordinary treatment.

A rectal examination is pathognomonic, if crepitus is present. If one area is stony hard, without general fixation of the gland, a stone should be suspected.

Cystoscopy is relatively unimportant. Trigonitis, slight swelling, and the general picture of infection is usually revealed.

The x-ray should be positive in all cases.

Differential Diagnosis

(a) Prostatitis is excluded by treatment and the x-ray.

(b) Many cases of hypertrophy contain sandlike stones which are usually of adenomatous character, without signs or symptoms of inflammation.

(c) Carcinoma may have the hard, nodular areas like stones, but these may be distinguished by history, cystoscopy, and x-ray.

(d) If tuberculosis, x-ray shadows of calcified areas, characteristically different from those of stone, will be present. Tuberculosis will usually be present in other parts of the patient.

(e) An abscess should be excluded by the history, clinical signs, and laboratory studies.

(f) In a case of stricture, a urethral examination, with dilation, will establish this diagnosis.

Treatment

The treatment should be surgical. If there is hypertrophy with sandlike stones, prostatectomy is indicated. For solitary stones, prostatolithotomy, with remedial measures directed towards the inflammation, is indicated. The transvesical or perineal route may be employed, depending upon the exigencies of the case. Cases presenting mild symptoms may be temporized with, but should be under observation.

L. A. McK., aged 32 years, the tall, thin, and angular father of three healthy children, gave a history of a herniorrhaphy, in 1918, and an appendectomy, in 1926. He claimed to have had no infectious diseases and denied a veneral history. Since he was 18 years old, he said that smarting, pain, and frequency had been associated with urination. Recently there had been poor control of urine and a diminution in the size and force of the stream. He had a feeling of uneasiness in the perineum, although there was no soreness or swelling of the testicles. Nocturia had been present two or three times. The urine was very cloudy but there was no hematuria.

A rectal examination showed that the prostate was slightly enlarged. A stone was easily felt, although there was no tenderness.

* Read before the Section on Urology of the Medical Society of the State of Pennsylvania, Erie Session, October 3, 1929.

The cystoscopic examination was negative except for the general picture of infection with purulent urine. The most marked inflammation was in the trigone region. A functional test of the kidneys showed that they were normal.

An x-ray examination revealed the presence of a calculus of the prostate. There were no calculi in the ureters or kidneys.

On May 29, 1928, the prostate was exposed through the perineal approach and the stone easily palpated. It was removed through a linear incision in the prostate. This stone was pear-shaped, measuring about an inch in length and three-quarters of an inch in width at its thickest portion.

The patient had a pleasant and normal convalescence and at present most of the symptoms are absent and the urine has become normal.

149 West Eighth Street.

PROSTATIC ABSCESS COMPLICATED BY CHRONIC NEPHRITIS AND UREMIA*

PAUL RANDOLPH STALNAKER, M.D.
PHILADELPHIA, PA.

This case presented many interesting features. The prostatic abscess caused the most serious problem, hence the above title. It is one of a total of one hundred and thirty-one consecutive cases that have been successfully treated by me by the same conservative, palliative methods. This entire series will be reported later.

J. B. R., U. S. N., a well-nourished male 51 years old, was admitted to the hospital, on February 13, 1929, with an undetermined diagnosis. His chief symptoms were urinary distention with overflow and semiconsciousness. His replies to questions were slow, often disconnected and irrational. His breath had a slight alcoholic aroma and a heavy, sweetish, uremic odor. He was very toxic. Later it was ascertained that he had had difficulty and straining at urination for two or three days prior to admission to the hospital.

The pupillary reflexes were equal and active and his eyes appeared normal. The blood pressure was 190/90. He had suprapubic discomfort and perineal sense of pressure with continual urinary dribbling. The bladder was much distended and easily palpable to the umbilicus. The external genitalia were normal. On admission, the prostate by rectum was large, soft and nodular in the middle and right sides but digitally did not feel like an abscess. He had leukopenia. Light palpation expressed a small amount of thin prostatic secretion, containing 6 to 8 pus cells per high dry field. Nos. 20 and 18 F soft-rubber catheters would not pass, but a No. 12 F passed and was made indwelling. The bladder was slowly decompressed against fifteen inches of hydrostatic pressure. The urine was very cloudy because of pus. The pulse ranged from 90 to 130. The temperature ran a septic course from 100° to 103° F. Five days later the prostatic pus cells were 100 per high dry field.

With this data on admission, the diagnosis lay between alcoholism, uremia, or toxemia probably arising from acute parenchymatous prostatitis causing urinary retention but failing in the digital feel of abscess and with leukopenia. Necessity required an indwelling catheter and gradual decompression. Subsequently the clinical picture changed with marked leukocytosis and digitally the prostate felt similar to a large fluctuating abscess.

The following laboratory reports are of interest: (a) X-ray films of pelvic bones and chest were normal. (b) Blood chemistry on admission was nonprotein nitrogen, 60 mgms.; urea-nitrogen, 21 mgms.; uric acid, 3.9 mgms.; creatinin, 1.2 mgms.; sugar, 90 mgms. (c) The basal metabolism report was plus 13 per cent. (d) Urinalysis on admission was: color, yellow; reaction, acid; specific gravity, 1.010; albumin, positive; sugar, negative. The urine showed microscopic granular casts, leukocytes, and red blood cells. (e) The Kahn and Wassermann blood tests were negative. (f) Blood examination, on admission was: hemoglobin, 90 per cent; white blood cells, 7300; red blood cells, 4,600,000; polymorphonuclears, 68 per cent; small lymphocytes, 30 per cent; mononuclears and transitionals, 2 per cent. (g) Phenolsulphonephthalein test of eight separate specimens every 15 minutes showed: 1st, 0 per cent; 2d. 0 per cent; 3d, 2 per cent; 4th, 6 per cent; 5th, 5 per cent; 6th, 12 per cent; 7th, 0 per cent; 8th, 0 per cent; total, 25 per cent. (h) On February 20, the white blood count was 28,000 and the polymorphonuclears, 92 per cent. (i) On February 27, the white blood count was 18,000 and the polymorphonuclears, 90 per cent. (j) On March 10, the white blood count was 7000 and the polymorphonuclears, 71 per cent. The blood chemistry was within normal limits.

Following the unauthorized adjustment of the catheter by an inexperienced corpsman, a right epididymitis developed on the fourteenth day, which subsided in about ten days and gave no further trouble.

The diagnosis of prostatic abscess was made by the septic temperature and pulse, the digital palpation of the prostate by rectum, the increase in prostatic pus cells per high dry field, the ribbon stools, the difficulty and inability to void, and the increase in the white blood count.

The treatment advised was rest in bed, liquid diet with forced fluid intake, indwelling catheter with gradual decompression, daily gentle prostatic palpation per rectum, bladder irrigations with warm boric acid solution, and symptomatic medication.

The patient was discharged to duty in excellent condition with gradual uneventful recovery and with ability to resume his regular duty, that of an electrician. The residual urine showed a persistent decrease from total to negative.

SUMMARY

The interesting features of this case were:

(1) A semiconscious patient with an alcoholic and uremic breath without any history and a tentative undetermined diagnosis. Apparently the prostatic abscess developed several days after admission as shown by the symptoms, prostatic examinations, and white blood count. Aside from other considerations, surgery was deemed contra-indicated because of the complications of chronic nephritis with uremia.

(2) High blood pressure, low phenolsulphonephthalein test, high blood chemistry, urinalysis

* From the Urological Department, University of Pennsylvania.

showing chronic nephritis, blood count showing normal white cells on admission and rising to nearly thirty thousand with 90 per cent polymorphonuclears within a few days; distended bladder and urinary retention with overflow, and ribbon stools.

(3) The radical and conservative treatment of the prostatic abscess by daily digital rectal palpation while having an indwelling catheter in the urethra and even after the development of the epididymal complication.

(4) Restoration to full duty in an old alcoholic with complete absence of residual urine.

(5) Although this extreme case required catheterization, and the picture was clouded with chronic nephritis with uremia, nevertheless, in the series of cases satisfactory results were obtained by daily gentle digital palpation per rectum.

(6) It is recognized that this conservative treatment of prostatic abscess is contrary to the latest teachings, but the proof is here in the results obtained, and this is the reason for presenting it.

Medical Arts Building.

EXSTROPHY OF THE BLADDER OPERATED BY THE BERGENHEM METHOD

T. L. DISQUE, M.D.
PITTSBURGH, PA.

Of all congenital malformations none is more distressing to the patient and his friends than is exstrophy of the bladder. With clothing continually saturated with urine, foul in summer and chilling in winter, the existence of these sufferers is distressing in the extreme and any means which will render their lives less miserable is worthy of trial.

Many operations, varying from plastic operations to implantation of the whole trigone into the rectum, have been devised for remedying this condition. Of these operations the Bergenhem has low mortality, does not invade the peritoneal cavity and is less likely to be followed by ascending infection than any other implantation operation.

The subject of this report is a male ten years old at the time of operation, August 30, 1923, fairly well nourished and with no complaints except those due to his malformation. There was no history of malformations in the family. Besides the exstrophy, there was an absence of the umbilicus and a failure of bony union at the symphysis which caused a peculiar rolling in his walk. There was no evidence of rectus muscles low down and they were either separated for a space of three inches or entirely absent.

Under gas-ether anesthesia, catheters were passed up both ureters and the ureters dissected free from the surrounding tissues including a rosette of bladder wall 2 cm. in diameter around each ureter. Continuing the dissection up the ureters until they could be brought down to the rectal wall in a straight line, we passed a pair of curved forceps through the anus, made incisions with them through the rectal wall, one on either side of the medan line, and drew the ureters through these incisions. No stitch was placed through the rectal wall and ureters as they seemed to remain in place without such support. The cavity remaining was packed with gauze and a rubber tube placed in the rectum.

For some days after the operation, the temperature fluctuated reaching 103.2° F. at one time. This fever gradually subsided, reaching normal two weeks after the operation and was accounted for by soiling of the field of operation from an incompletely evacuated enema. Six years after this operation the boy is now well grown, his clothing is dry, he is able to attend school and in every way take his place in society instead of being an outcast. No attempt has been made to remedy his epispadias because of the poor condition of the surrounding tissues.

Mayo and Walters state that statistics show 50 per cent of those suffering from this deformity die by the tenth year if unrelieved, and 66 per cent by the twelfth year.

Buchanan collected twenty-six patients operated upon by this method, with three operative deaths, and those recovering from operation report that they are well, at periods varying from four months to six and one-half years. To these cases Stevens added a patient who was living five years after operation and six other cases from the literature with two operative deaths. To these Hutchins and Hutchins[4] have added two cases without operative mortality, one dying from influenza seventeen months after the operation.

Jenkins Building.

HERPES GENITALIS

Illustrating Possible Errors of Diagnosis

J. D. DENNEY, M.D.
COLUMBIA, PA.

F. H., a male, aged forty-six, consulted me on June 7, 1928, in regard to a painful ulcer of the corona glandis which, in spite of a variety of treatment, had persisted since April 27.

The lesion had appeared as a small bleb, from which the surface epithelium rapidly broke down, leaving a painful, denuded area. He had noticed during the week preceding the appearance of the eruption, a marked cutaneous hypersensitivity of the penis and the inguinal region on the affected side and an occasional stinging pain in the perineum and pubic region.

He had consulted a physician who diagnosed the lesion as chancroid and employed a strong antiseptic and fulguration. This resulted in aggravation of the pain and tenderness and a rapid increase in growth. By this time

it presented the appearance of Hunterian chancre, with a hard base and well-defined edge.

A second physician who saw the ulcer, proceeded with a preliminary injection of neo-arsphenamin before receiving the report on the blood Wassermann which proved negative. When the patient came to me he was in an extremely nervous condition, believing himself to have some incurable venereal infection.

An important fact brought out by questioning him, was that although there had been no extra marital exposure, his wife was occasionally very much annoyed by crops of small painful blisters which appeared on the genitalia after menstruation and which disappeared in a short time, without treatment.

Examination showed a denuded area of the glans, three millimeters in diameter, with slight induration and a fair amount of serous exudate. There was marked cutaneous hyperesthesia of the penis and inguinal region on the affected side, and definite lymphatic enlargement. The lightest pressure on the lesion was extremely painful.

On the basis of the history and behavior of the eruption, a diagnosis of genital herpes was made.

The patient was instructed to wash the area twice daily with a mild soap, and apply liberally a starch and talc dusting powder after careful drying. Opposing surfaces were kept from contact by cotton between glans and prepuce. Healing was complete in ten days, a scar remaining as a result of the fulguration.

I wish to stress the importance of the early recognition of genital herpes. Correct treatment will save the patient considerable pain and distress. The condition usually pursues a mild and harmless course unless irritated by vigorous treatment methods. Several outstanding symptoms deserve consideration.

Hyperesthesia over the area of distribution of the branches of the ilio-inguinal nerve usually precedes the appearance of the lesion by several days. This may be so marked as to cause annoyance from contact with the clothing.

The exquisite tenderness of the ulcer area is almost pathognomonic. There is no other genital lesion possessing this characteristic to so extreme a degree as herpes.

There is an early tendency to auto-inoculation to opposing surfaces of mucous membrane or skin with formation of the clusters of typical herpetic blebs.

The slight enlargement of the inguinal nodes may lead to some confusion in diagnosis, but this is found present in every pronounced case.

In regard to treatment, the writer is certain that the employment of a strong antiseptic, caustic, or fulguration is entirely contra-indicated. The lesion is irritated to the degree that it takes on the activity of rodent ulcer with severe pain and likelihood of secondary infection. Wet dressings are unsatisfactory.

The treatment used in this case has yielded almost invariably a rapid cure, with early relief of symptoms. In addition, sedative applications of quartz light have proved of value, as has, also, the use of pituitrin in a few obstinate cases.

In conclusion, genital herpes is of far more frequent occurrence than generally supposed. Many cases seen by the physician are diagnosed as chancroid or chancre, and when seen later by the genito-urinary specialist, their typical appearance is hopelessly masked as a result of vigorous treatment. More attention to details of the history and a closer observation of the appearance of genital eruptions will furnish proof in support of a diagnosis of genital herpes in a surprising number of cases.

30 South Second Street.

RENAL CALCULUS SIMULATING ACUTE APPENDICITIS

E. L. HAZLETT, M.D.
CANONSBURG, PA.

H. W., male, aged nineteen, was seen first in October, 1926, complaining of severe abdominal pain. The pain was so severe it required an opiate. The right side of the abdomen was rigid and tender to pressure in the right iliac fossa. The patient was seen in the home and diagnosed acute appendicitis. An operation was refused. A small amount of blood appeared in the urine at this time. Recovery was made in three days.

Soon after this attack, the patient went to another physician who had an x-ray picture taken but found no stone.

On July 27, 1927, the patient had a second attack and was seen by a third physician who diagnosed the case, acute appendicitis, but again operation was refused. The third attack, March, 1928, was not so severe, but the patient voided very bloody urine. The patient now insisted that he had appendicitis and would be operated on soon.

The fourth attack, April, 1929, was severe and the patient was sent to the hospital. The urine contained considerable blood. The leukocyte count was 11,800. The x-ray showed a renal calculus. The patient was operated on a few days later and a large stone was found in the pelvis of the kidney. The recovery was uneventful.

The purpose in reporting this case is to bring before you not only an unusual case but one which many times will puzzle the practitioner, the urologist, and the surgeon. It also emphasizes the importance of making a careful diagnosis.

Appendicitis comes readily to the mind of the general practitioner or surgeon if a patient complains of pain in the right lower abdomen and, because of the widespread publicity which has been given the importance of immediate operation in appendicitis, it is not difficult to persuade one who has such pain or discomfort to submit to an operation.

Unfortunately this is often done without a sufficiently careful analysis of the case. The

acute type of appendicitis as a rule presents no difficulty in diagnosis. The retrocecal appendix, however, may simulate many kidney conditions and make it difficult for any one to distinguish.

One authority, commenting on the difficulty in distinguishing between renal and abdominal conditions, states that there are at least forty causes for pain or tenderness in the right lower abdomen.

The character of the pain is usually different in appendicitis and renal conditions. Pain from renal colic radiates downward; appendical pain is usually epigastric. With a retrocecal appendix, however, the pain may simulate renal colic, because of the inflammation involving the kidney or ureter. Renal colic is more persistent; appendical pain is often intermittent. Renal colic is much harder to control with opiates than is appendical. Vomiting is more constant with appendicitis.

The muscle rigidity is more marked in appendicitis, because the renal conditions are retroperitoneal. The definitely localized tenderness of appendicitis does not as a rule accompany disturbances produced by either renal or ureteral stones.

The leukocyte count is not as high in renal cases as in acute appendicitis.

Examination of the urine will often decide the diagnosis. In acute renal cases one usually finds blood and often pus. One should not be satisfied with a single examination of the urine as pyuria is often intermittent.

A retrocecal appendix will also produce blood in the urine through its contiguity to the inflammation.

A high temperature indicates the kidney condition. Very seldom is there a high temperature in acute appendicitis during the first twelve hours.

The x-ray will usually show the presence or absence of stones.

Many patients, with pain of renal origin, are first operated for acute appendicitis and much to the chagrin of the surgeon the attacks recur and he finds the true cause of trouble. Many have made this mistake and may continue to do so occasionally.

Surgical exploration of the abdomen may be necessary in cases suggestive of kidney pathology before urologic examination may safely be permitted. There are cases in which the vital issue must be met. An acute appendix in need of operation should not be allowed to wait without operation, for urologic examinations.

Alhambra Theater Building.

FOREIGN BODY IN THE KIDNEY

DAVID P. McCUNE, M.D.
McKEESPORT, PA.

H. H., aged twenty-nine, married, no pregnancies, has a negative family history. Her previous hospital history is: appendectomy, in 1917; drainage and curettage, in 1925, for painful menses and sterility. She was again admitted, July, 1927, complaining of diarrhea, pain in epigastrium, general malaise, nausea, vomiting, loss of weight, blood in the stool, and dark-colored urine. At that time there was marked abdominal tenderness from the ensiform to the pubis but no rigidity and no mass felt. Films at that time were negative for foreign body or disease. The patient claimed she vomited several times following a barium meal, but films showed its presence normally. The diagnosis at that time was hysteria. In two weeks she was improved, and was discharged. Two months later she was again admitted, complaining of pain in the lower right abdomen and amenorrhea. At that time the abdomen was opened, the right fallopian tube resected and some peritoneal adhesions were broken up.

She was admitted to the service of Dr. T. S. Armstrong, March, 1929, complaining of severe attacks of pain in the left loin and hematuria, the blood usually being passed after a severe attack of pain. This condition had existed for two months. Two days before the first attack, the patient had a hard fall but her back was not struck at that time. Pressure over the left kidney caused severe pain, and a small indurated area was felt about seven cm. above the crest of the left ilium and a little anterior to the right axillary line. Her general appearance indicated endocrine disturbance.

Cystoscopy showed a normal bladder, containing dark-bloody urine, which suggested a ruptured kidney. The function was normal for both kidneys. No blood was seen from either ostium. Pyelograms showed a foreign body, resembling a needle, in the left side of the abdomen with the point inserted about two cm. into the lower pole of the left kidney. Under general anesthesia, an ordinary gold-eyed needle eight cm. long was removed; the sharp end being inserted into the lower pole of the kidney for about half its length. In a few days after the operation, the urine cleared and there was no further recurrence of pain or hematuria. About one week after the patient went to her home, the doctor was called by the patient's mother who told him that there was a second needle in the abdomen. After careful questioning, the patient confessed that she had thrust both needles into herself to commit slow suicide. It is likely, however, that both were inserted for the purpose of eliciting sympathy from her husband, with whom she had quarreled. The second needle was easily removed at her home by means of a hemostat.

A foreign body in the kidney, introduced from without, is exceedingly rare.

Such patients should be carefully examined from a psychoneurotic point of view.

208 Masonic Building.

ABSTRACT OF DISCUSSION OF CASE REPORTS

EDWARD L. KEYES, M.D. (New York City): It amuses me to note the diagnoses put on the hospital charts. If the patient comes in complaining of what is considered a typical renal colic, but let us say the colic

has passed and there are no blood cells in the urine, there is no physical evidence, the kidneys function, and the examination shows nothing wrong, it is my opinion that many of these have renal colic, and put them down as such, and have done so since once thinking it was not renal colic, and the patient subsequently passed a stone. Do you put them down as stones, or how do you list them? The question of the appendix and the stone brought this to my mind.

BENJAMIN A. THOMAS, M.D. (Philadelphia, Pa.): In those cases in which there is an absence of any evidence by the x-ray, there is always a possibility that there might be a small calculus that has passed, but that would be seen in the urine. If there is no evidence in the urine to show that it passed, I would put it down as an undiagnosed case.

EDWARD L. KEYES, M.D. (New York City): You are lucky. They won't let me do that. Of course, it is undiagnosed. There is no evidence of blood in the urine.

THOMAS C. STELLWAGEN, JR., M.D. (Philadelphia, Pa.): I write an opinion, cite what has been done, and then generally end with the statement that I was unable to determine the cause of the pain.

EDWARD L. KEYES, M.D. (New York City): In a hospital case they insist on a diagnosis.

THOMAS C. STELLWAGEN, JR., M.D. (Philadelphia, Pa.): They do not with me.

THOMAS L. DISQUE, M.D. (Pittsburgh, Pa.): I put it down as undiagnosed.

ESTEN L. HAZLETT, M.D. (Canonsburg, Pa.): I think it is a good idea to do as we used to in the army, and if you got a case you could not diagnose, say fever of undetermined origin. You cannot tell what it is and if you put it down as undetermined your statistics would not be good. In our hospital, we determine the probable diagnosis.

EDWARD L. KEYES, M.D. (New York City): It would be amusing for us as urologists to get the term renal colic or renal calculus for future reference purposes into those histories, and I do not object as much as I ought to. I have not diagnosed the trouble, have not the least idea what the patient has, but I have a primary belief it is renal colic and there is nothing that makes it look like anything else. So I put it down as renal stone. That is the way we wish them classified in case we are looking over a series of records in the future to get all the cases.

JAMES C. BURT, M.D. (Pittsburgh, Pa.): In compiling statistics, would it not be confusing to be unable to back up our conclusions?

EDWARD L. KEYES, M.D. (New York City): I would not dare put those cases into any report as stones, because probably half of them are not.

JAMES C. BURT, M.D. (Pittsburgh, Pa.): On the other hand, many of these statistics are taken from hospital reports. It is confusing.

BENJAMIN A. THOMAS, M.D. (Philadelphia, Pa.): I have seen a number of hospital reports in which the diagnoses are not put down, but the symptoms are.

THOMAS C. STELLWAGEN, JR. M.D. (Philadelphia, Pa.): I have wondered whether or not the patients have a shower of crystals, particularly the oxalic crystals, and then we are unfortunate enough not to get them during one of those showers. I have had a shower of crystals myself and had renal colic from it, or apparently uretal colic, and later on passed a stone, but at an interval of about seven or eight years.

JAMES C. BURT, M.D. (Pittsburgh, Pa.): That is the point Dr. Keyes is bringing up. Possibly if these were traced, you would find many of them are stones.

GIDEON TIMBERLAKE, M.D. (St. Petersburg, Fla.): As Dr. Keyes says, you believe the patient has kidney colic, but the picture is negative. My attitude is that it is better to put down "diagnosis undetermined," and if there is an objection, I say, "If you are so good, come down and make it. We have not been able to do it."

PAUL R. STALNAKER, M.D. (Philadelphia, Pa.): In some hospitals, the tentative diagnosis may be changed.

DAVID B. MCCUNE, M.D. (McKeesport, Pa.): In eleven or twelve years' practice I have seen twelve cases of genital herpes in which erroneous diagnoses were made and much distress and worry caused the patient. Have any of you had a similar experience, and have you ever, as I have, treated herpes in one stage or another for chancre?

EDWARD L. KEYES, M.D. (New York City): Nearly everybody has had that experience.

S. M. HANKEY, M.D. (Pittsburgh, Pa.): The laboratory cannot be relied on entirely, although certain manifestations require the use of the x-ray in order to determine the diagnosis. To illustrate, one of my patients recently had a severe renal colic, an outstanding type. The pain did not respond to ordinary medication, so he was sent to the hospital, and a uretal catheter inserted and allowed to remain. There was a twelve or fifteen cm. obstruction, and the catheter had to be manipulated in order to insert it. The patient was comfortable for the next twenty-four or thirty-six hours; then the catheter was removed, and the patient immediately developed acute renal colic, with an elevated temperature. He was again examined cystoscopically. The x-ray was negative for stone. The urine was watched carefully but there was no evidence of a stone's having passed. This catheter (No. 9) was allowed to remain in the ureter for about two or three days, then it was withdrawn. The patient's symptoms were relieved and he was discharged from the hospital about a week later with his temperature normal. During that time he was watched carefully for evidence of a stone, and since that time he has been in the hospital and been watched carefully for evidence of the stone, but it has not been discovered up to this time. He has had no pain, and that was practically two months ago.

I did not hesitate to write down renal calculus, and believe that we should fall back on our clinical knowledge.

HENRY SANGREE, M.D. (Philadelphia, Pa.): I have a patient, a little girl, whom I have known for nearly six years, and who suffers these attacks. She was in the University Hospital for two or three months one year; another year, she was in the Children's Hospital for two or three months; and finally, at the Presbyterian Hospital. Pyelograms were taken of two positions, and nephroptosis was found on one side. She had typical renal colic. An intern in the Presbyterian Hospital had the same symptoms.

EDWARD L. KEYES, M.D. (New York City): There is another reason for my agreement with your point of view, and that is illustrated by the following case:

A man came to me complaining of renal colic. No

reason could be found for his repeated suffering, which occurred at short intervals with a few red blood cells in his urine. I catheterized him, put the wax bulb up his ureter, and had pyelograms made, and he seemed entirely normal. He returned to his home after being told that I could not find what was the matter with him. After three or four months, he came back with the request for an operation. His pain had continued, and his doctor had failed to relieve it.

I operated on him and explored the kidney and pelvis, which were entirely normal; put a catheter into the bladder, which revealed nothing and then I did a decapsulation to stop his renal pain.

The operation was followed by the passage of a very small stone. He got infected, and his kidney was so destroyed that a nephrectomy was done, and since that time he has had trouble with his other kidney. He occasionally has prostatic abscesses. His remaining kidney is full of stones. This was about fifteen years ago. I have not explored a kidney for stone since.

GIDEON TIMBERLAKE, M.D. (St. Petersburg, Fla.): This discussion on renal colic recalls to me a healthy man, about twenty-four years old, who had pain in the right side, and we diagnosed it as renal calculus. The x-ray indicated a stone in the kidney. At operation a normal kidney was found. I raised it up and looked through the pelvis but found no stone.

The patient got perfectly well. The pus and blood disappeared from the urine; his symptoms disappeared and he was fine from then on. Subsequent x-ray pictures of him showed that shadow. My impression is that I lifted the kidney from where it rested upon a calculus formation of some kind. We were wrong, but the result of it was that the patient was relieved.

BENJAMIN A. THOMAS, M.D. (Philadelphia, Pa.): Two or three years ago some one in one of the national associations read a paper on perirenal sclerosis or perinephritis as the cause of neuralgia, no other possible diagnosis conditions were present, and he claimed to have relieved a number of patients by mobilizing the kidney and restoring it to its original position. Possibly Dr. Keyes' question may revolve on that particular diagnosis.

THOMAS C. STELLWAGEN, JR., M.D. (Philadelphia, Pa.): One of my patients presented a stone that had entered the ureter from the right side, and it appeared the stone was retained within the ureter. The patient showed a beginning hydronephrosis, probably the first stage. The pyelogram was apparently satisfactory. Approach was made by the Gibson operation, and the ureter was reached without any great difficulty. All means known were used to remove that stone, until the patient had stood enough. It was a question at the time if it would have been proper to expose the bladder and made a transvesical attack on that stone which could not be felt, and backed out. The problem with me is whether I have got to operate on that man to relieve him of his pain or whether I can approach that stone possibly through a transvesical incision. I believe the stone is there in a pocket. The patient had a normal uretral outlet to his bladder, and the two ureters came together probably two or three cms. before reaching the bladder. I probably would have attempted a transvesical exposure had it not been for the anomaly of the urine.

WILLARD H. KINNEY, M.D. (Philadelphia, Pa.): Referring to Dr. Keyes' original inquiry regarding the final diagnosis in the cases of renal colic he described, not infrequently the migration of a stone is so rapid that only a short time elapses between the initial typical attack of colic and the passing of the stone down the ureter into the bladder and on out the urethra unnoticed. The Jefferson Hospital has on the history sheets a provisional and final diagnosis. In the type of cases just mentioned a provisional diagnosis of renal stone would be made per se, and notwithstanding the failure to picture the presence of a calculus by the x-ray, I agree with Dr. Keyes that a final diagnosis of stone may be placed on the history sheet.

DAVID B. MCCUNE, M.D. (McKeesport, Pa.): In making a diagnosis for renal stone, the patient will some times furnish aid. A woman presented typical symptoms of urinary calculus. Routine urologic examination, including plain films and pyelograms, failed to indicate the presence of a stone. One morning she handed me a stone which she stated she had passed during the previous night. It looked rather odd for a kidney stone; was dark in color, smooth, and symmetrically shaped. Each morning of the next three or four days she had a similar stone to show us. About that time, the intern became suspicious and, in searching her belongings, found stones which had been removed from the gall bladder and given to her fifteen years before. These she had carefully preserved and during each night would insert one of the gall stones through the urethra into her bladder. The next morning we were informed of its presence and she would promptly pass it with her first urination.

EDWARD L. KEYES, M.D. (in closing): In one of my patients, the x-ray showed a stone which seemed to be in the vesicular portion of the bladder. Cystoscopy had not exactly determined that point, so I opened the bladder. My assistant was asked to put his finger in the rectum, then grasping the bladder with an Allis clamp, I was surprised to find that I could almost deliver the ureter mouth out of the abdomen though it had not been dissected. By holding the bladder up with a clamp and feeling under the bladder walls, about an inch above the opening, it was easy to bring it out after slitting the uretal meatus.

The following reference is made to the care of the mouth during pregnancy. Since caries of the teeth makes rapid progress during gestation, the proper care of the mouth with a view of preventing this malady becomes apparent. When one considers the active rôle acids play in the production of caries, and when one further considers that vomiting during the first few weeks brings acid stomach contents into the mouth daily and oftener, there should be appreciated the basis of a rational explanation for the progress of caries. Upon this explanation the prophylaxis is usually simple and efficient. Education of the mother comes first, then the simplest alkaline mouth wash, such as lime water or a saturated solution of boric acid to which has been added five minims of phenol to the ounce, or even sodium bicarbonate may be used. These agents if used freely at frequent intervals and immediately after every occurrence of vomiting should be of benefit in the prevention of caries.

Unfortunately, the physician is not consulted in the average case until the period most important for prophylaxis is passed. Hence every suitable opportunity to educate mothers and those likely to become mothers should be improved with regard to early attention. If we are successful in the protection of the mouths and teeth of our coming generation there must be some coöperation between the family physician and the dentist.

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Editorials

MENTAL HYGIENE AND THE SURGEON

The patient most in need of mental hygiene guidance is the surgical one. Reacting, primarily, to the fear of some dreadful disease; secondly, to the strangeness of the hospital environment; thirdly, to the fear of operation; fourthly, to the effects of infection; fifthly, to the trauma to the nerve filaments and the sympathetic system; and sixthly, to the postoperative shock, it is no wonder that many postoperative cases are critical and that many patients die, although the operative technic was carefully and skillfully followed. Surely the entire setting, if not properly controlled, forms an excellent background for the development of a nervous collapse and a psychoneurotic state.

Many of the pioneer surgeons (Crile) have long sensed the relative relationship of the psyche and the nervous reaction to the success or failure of the operation, even to the death of the patient. Therefore, they make frequent contact with the patient after hospitalization and during the preoperative period and they frequently use morphin and atropin prior to the operation (anoci-association). One also learns with satisfaction of the use of spinal anesthesia, which has to a great degree lessened the toxic postoperative shock of ether to the nervous system. On the other hand, one cannot but sense the psychic reactions of the patient under local anesthesia to unfamiliar scenes such as an array of K.K.K., shining instruments, the cutting of tissue, the sawing of bones, etc. All these must be upsetting to the normal person and certainly must exaggerate the mental state of the psychotic, psychoneurotic, and eccentric patient.

Reduced to a comprehensive formula, mental hygiene should be carried to the patient by the operating surgeon whose primary function in this respect would be the quieting or banishment of fear, the creation of the proper mental attitude to the operation per se, aiding the patient to a proper adaptation to the situation and environment in which he finds himself, the constant use of sedatives and proper consideration of the psyche prior and during the postoperative periods and convalescence.

In addition to the above, Bailey in the *Pittsburgh Medical Bulletin* (Feb. 8, 1930) proffers helpful advice to the surgeons in directing their attention against unnecessary operations in psychoneurotics; he cites the value of mental hygiene in thyroid patients; the careful study of dementia præcox patients, particularly in the so-called predementia stage before interfering surgically; and the operation on patients in extreme exhaustion associated with prostatic and gall-bladder disease before they are physically built up; and advises restricting that type of visitor during the preoperative and postoperative period who enumerates on recent cases of the same type of diseases, etc. To these can be further added that while it is generally recognized that some mental states, as pointed out by many observers, are dependent on very definite surgical diseases, the surgeon would do well never to interfere surgically in these cases except on advice and counsel of the neuropsychiatrist. Occupational therapy can well be added for the surgical patient of long hospitalization.

The writer is not unmindful of a great surgeon's position of superiority in all matters pertaining to surgery, the high skill and technic which he possesses, and the handling of the mental phase of his patients. These mental hygiene suggestions are proferred with the hope that they be useful in helping to prevent possible death from psychogenetic factors; to overcome a certain disregard for nervous reactions; to relieve that great group of neurotics from unnecessary surgical interference; and to eliminate from the postoperative surgical picture a great group of patients who are psychoneurotics, but are now being labeled by the surgeon as sufferers from adhesions, abdominal or otherwise.

Judging from the high esteem in which surgeons are held by their patients, one senses that many of these gentlemen are already expert mental hygienists as reflected in the complete

rapport between surgeon and patient and a "transference" that is also complete. All of which leads one to say that there is more to surgery than surgical technic. The patient must be considered as a whole.

VACATION REFORM

The desirability of some method of spending vacations other than that now in vogue at our most frequented summer resorts is evident to the physician who is familiar with the life at our great watering places, and the needs of the tired workers of our hot, dusty cities. Every one needs an occasional vacation, and the best form of vacation is that which gives rest and change. Neither of these essentials is to be found in the life of the fashionable summer cities of our land; on the contrary, all the worst features of society life with its nerve-straining events and unseasonable hours follow those seeking to escape the demon nervousness, the terror of the brain worker. The inhabitant of the crowded town needs the change to country or lonesome fishing village; the man of inland plain does well to seek the bracing air of the mountain or shore; he of the more stimulating atmosphere of the elevated plateau should get a little of the relaxation of lower levels, and all need the ozone of the ocean breeze; for how is it possible to get that ozone except from the air blown over miles of water? In any case, the change is essential if one is to have the best from vacations.

As to the rest, any escape from the wearing noise of bawling hucksters, clanging bells, and the continual roar of autos and electric cars is a rest to the unfortunate of our modern city life; but the most desirable form of rest does not, by any means, mean sitting about a hotel at the shore or in the mountains. The best kind of rest for the brain worker draws blood away from his head. Indolence is no more desirable than too much headwork, for while it does not grind the nerves so rapidly it is too purely passive to have much recuperative value. By squeezing the liver in rowing, or filling the lungs with fresh air, and stirring up the circulation by mountain climbing or a bicycle tour, the brain is much more rested than by absolute quiet. The man who takes rational vacations is not without his sorrows; it sometimes rains at the wrong time and makes him uncomfortable and ill-tempered; he sometimes gets very sore feet, perhaps blisters on his hands; very often he is dusty and dirty. The things that are worth having in this world do not come cheap. The man who overcomes the aversion to physical exertion and physical discomfort which brain workers almost invariably have, and who cultivates a little healthy muscle in his vacation time, will find that he goes back to his real work with a better relish for it and with a much stronger mental grip.

THE DIDACTIC LECTURE

The didactic lecture has been very severely criticized from all sides during the past few years, and quite naturally; it is the reaction which might be expected after many years of misuse and abuse. Very much of this criticism is just and needed, for there can be no doubt that the didactic lecture is still too much in evidence in many, perhaps most, medical schools of this country. But, as is usually the case in revolts of this kind, the reaction has gone too far. When any critic is able to see only one side of a question, or at least is willing to present only one side of a question, his criticism loses much of its value. It would seem that most of the critics have been unfortunate in attending lectures at institutions in which most of the professors are incompetent or are too lazy or too busy to prepare suitable lectures. It is true that most institutions have too many teachers who were chosen because of the influence they could bring to bear, instead of from their fitness from the standpoints of education, experience, and ability to teach. It is true that there are too many medical teachers who have not enough education to use the English language correctly; those who copy notes out of textbooks and pump out the dull facts poorly arranged to the sorrows of the much-abused student; others, who go to their classes with hasty, insufficient preparation; still others, who have education, experience, a good knowledge of the literature of their subject, and the desire to teach, but who have not the faculty for imparting knowledge. On the other hand, we have met teachers of broad experience, thorough knowledge, and faithfulness to duty; men with the ability to select essential facts, systematize knowledge, and present it with such clearness and force that their teaching has been an inspiration to many of their students throughout their lives. There are a few institutions in which the majority of the teaching force are men of this type. As a general rule, the man who is a failure as a didactic teacher, is just about as much of a failure at any kind of teaching. We know of recitations that would never be attended if the students did not believe that attendance had an important influence at examinations; of laboratory courses, from which the student comes with confused, indefinite ideas

of what he has seen, and shiftless methods of doing work which are worse than useless; of demonstrators who know less about the subject they are supposed to demonstrate than the students they try to teach; and of clinical lectures, away from which dozens of students come, saying that they have not seen or learned a single thing.

These are the exceptions, but so is the absolutely useless didactic lecture the exception. There can be no question but that the use of eyes, fingers, ears, and nose are of the highest importance in gaining medical knowledge. Clinical and laboratory teaching has rightly come to the front, and the didactic system needs more pruning, but it seems to us that there is still left an important field for it to fill. It is needed to prepare for and to fill out the blanks left by clinical teaching. It is possible to attend for a year all the clinics of certain very famous surgeons in Germany, at which clinical lectures only are given, without seeing or hearing one word about the surgery of the liver, the kidney, or any of the thoracic organs, and some important subjects are bound to be left without even mention, in any series of clinical lectures.

Then, again, it is almost impossible for the average clinical lecturer, who is more or less occupied with his patient, to present his ideas in such orderly succession as to be most readily retained by the student; it is a jumbled-up lot of facts, not a series of connected, related ideas, such as would be presented by the able didactic teacher. Furthermore, it is absolutely impossible to teach many details of operative work, etc., by clinical lectures. By the use of specimens, lantern slides, models, charts, and blackboard sketches, however, the didactic lecturer can make such points fairly clear to many students. In such ways, supplementing, unifying, and demonstrating, the didactic lecture seems to fill a very useful place.

DISGRACE NOT DISGRACEFUL

One of the strangest and saddest psychologic facts, and one that seems daily to become more glaring, is this—that men are not ashamed of disgrace. The advertising doctor, the medical politician, the professor using college and hospital for personal ends, the office-hunters—these and their fellows we have ever with us. Catch one of these doing the most outrageous things, let his secret vice and sins, by accident or design, be published all over the land, let a man be proved by his own words and writing a briber, honor-seller, liar, drunkard, and what not—he still not only faces the world unashamed, but he announces himself a candidate for office, continues his criminal methods, and, what is worse, seems to suffer little in the estimation of his "friends." If he can escape the law, or professional dismissal, no matter what the facts may be, he affects to disregard dishonor. It is indeed fast becoming a point of pride to escape the professional and legal consequences of evil while reaping the temporary rewards. This Mephistophelean cunning is too manifestly becoming the ideal character. The ethical and psychologic facts on which rest honor and self-respect with decent men are laughed at, and Reynard's cunning is considered of sole importance.

In this riot of social and political debauchery it behooves us, as a profession, to hold to the ancient way of self-respect. If we accept the popular fashion, we are, as a profession, undone.

MARRIAGE LICENSES

The question as to the extent to which the state should supervise the ordinance of marriage is debatable, but that it should be carefully guarded is conceded by all. While some states or countries are lax in this respect almost to criminality, others hedge marriage with nearly insurmountable obstacles. For instance, a young lady of American parentage decided to be married in Paris. Although twenty-seven years of age, it was necessary to obtain the consent of her parents. The father being dead, a certified copy of his death certificate had to be forwarded, together with an affidavit of the mother's consent. As such legal documents are not always obtainable, it is questionable whether the young lady would ever have been permitted to marry had she failed in this. In the face of such experience, it is not surprising to hear of lax morality and laws varying greatly as to marriage in different states. Public health is dependent upon public morals. Put too great restrictions around moral and legal cohabitation, and the immoral and illegal types will naturally follow.

BIBLICAL MEDICINE

The value of the trained mind, not only in the special field to which it is devoted, but to any cause with which it may be allied, is curiously brought out by Dr. J. Howe Adams, in an article on "The Medical Knowledge of Luke" published in the *Sunday School Times* a number of years ago.

Dr. Adams speaks of the "beloved physician's" accuracy of observation and precision of

language which aid so effectively in establishing the credibility of his writings, and deplores the fact that translations were not made by men sufficiently trained in medicine to emphasize this fact. It is noteworthy that, in the original, Luke generally uses Greek terms distinctly medical, which, if accurately translated, would in many cases add to the clearness of the Biblical narrative. A particular instance is his use of the medical term for epilepsy when the other evangelists speak of "being possessed with a devil," and also his use of the medical term for convulsion in writing of the cure which others describe by the phrase "the devil came out of him." Matthew and Mark may be said to present the life of Jesus from the point of view of the people, John from the psychic and sentimental side of his nature, and Luke from the scientific aspect of his work.

The medicine of the Bible possesses much historic interest, but only a physician can deal competently with the subject.

THE HYGIENE OF BANQUETING

The hygiene of banqueting, it is feared, is not always so well illustrated by physicians as is desirable, neither for their own sakes, nor for the sake of their influence upon the community. One should practice what he preaches. If it is wrong to eat too hurriedly, it is quite as wrong to prolong a dinner for three or four hours, to be followed by several more hours of sitting in dense clouds of tobacco smoke.

Instead of ten or eleven o'clock, we think seven would be a far more sensible hour to choose for beginning a banquet. Most of us require several hours of sleep each night, in order to live lives even remotely approximating healthfulness and righteousness. At large medical meetings, where literary and scientific work must be resumed early the next morning, it is folly to begin a dinner at ten that can hardly end before two or three in the morning. The banquet habit is fast becoming an abuse, and if it is so abused as to demand self-stultification of professional hygienists, the sooner the thing itself is done away with the better.

We realize, of course, that there are instances of dinners for medical men who will not sacrifice their evening office hours to be among those present, and who will not subscribe if required to miss part or all of the dinner. Hence the dinner is called for a late hour. So far so good. But why unnecessarily prolong the assembly with an indeterminate number of speakers? That is where the dinner hour is continued to a foolish extreme.

THE PSYCHOLOGY CRAZE

Ever so often human beings become faddists. They follow without investigation, background, training, or adaptation, the leadership of any given movement or fad. Today they follow the popular fad of the psychology craze, that craze in which almost any individual without qualification finds he possesses certain Freudian powers and is able to explain all phenomena, great and small, by the teaching of the intellectual psychology. As a result, psycho-analysis is being exploited by fools, half-baked so-called psychologists, the baker, the grocer, and the schoolgirl of sixteen. This, no doubt, came to pass when psychologists and neuropsychiatrists turned to the public press to exploit in detail psychology, its mechanisms, and its teachings, all of which has been disastrous to scientific thought and healthful progress.

When one sees everything explained from Nero's personality to Hoover's election on the basis of psychology, he begins to see the ridiculous side of the situation. It is most unfortunate that a scientific contribution should have taken such a turn. When one tries to ascertain the reason for such affairs, he must in a way deduce a certain evaluation of the new psychology. In doing so he is immediately struck with two things, first the good, and second the evil, which it possesses.

Freud's contribution to science must rank with those of the greatest, and while it has thrown much light on the subject of psychology and revealed much in the field of psychopathology, the real true evaluation of psycho-analysis in the art and practice of neuropsychiatry still remains speculative.

The harmful effect of Freud's contribution was not due to Freud, but Freudian disciples. Here was something new. Here was something to be capitalized. The lure of the press and the platform was too great; human frailty yielded. Medical ethics, soothed by the present-day practice of medical enlightenment through the press, gave way to the urge of personal publicity. Magazine writers saw the cue and took it. Popular writers capitalized it—a capitalization made easy when men and women, young and old, preachers, spinsters, barristers, already made ready, found it a medium of expression of thoughts which for years had been taboo; such as the biological urge, sex expressions, repressions, sublimation, complex, inferiorities, conflicts, dreams and dreamy states—words and terms today used with little true Freudian significance and interpretation.

As a result of this and all these, every boy

and girl of adolescent age, the rank and file of citizenry, and the clergy, the medical profession has precipitated unintentionally a conflict which psycho-analysts will have no difficulty in analyzing, but a conflict difficult to overcome, a conflict of idealism versus materialism, morality versus immorality; for, shall youth lend its listless ear to psychoanalytic whispers, "do not repress," or to the voice of Moses through the ages, "thou shalt not." Herein lies the conflict.

It was most unfortunate that Freud regarded the basic instincts of purposive activity to be wholly the sex urge; for the theory of purposive activity, censorship, conflicts, repressions, dreams, symbols, sublimation, projection, and rationalization is not half bad phraseology in expressing conditions and phenomena which psychiatrists had long before recognized but had not clothed with such a delightful terminology. For example, it is much easier to ask "What is your complex or conflict?" than to say "What are you worrying about?" It is much more polite to say "repress," or "sublimate," than the old alienist's way of saying "forget it—concentrate on something else." And to say to the patient "you are rationalizing" is better than to say "you are lying." All of which leads us to ask how much of the Freud idea is really new except the phraseology, the sex theory, and interpretation of dreams. However, the most unfortunate part of the entire situation is that Freud and his disciples did not foresee the harmful effects of such teachings. As a result of the bungling of Freud's disciples, the old Master himself must pass on not fully appreciated.

And so we must wait, but in vain; for another century must pass for a true evaluation of Freud's work. In the interim one prays for the advent of another fad, something less dangerous, less harmful, something more hopeful, something that will lure the masses to more sober thinking, something that will return to youth his former ideals of truth, virtue, and morality.

THE UNKNOWN THINGS FOR WHICH THE EDITOR IS NOT THANKED

The unknown things for which the editor is not thanked far outnumber those that are known. In politics the good lawmaker or executive officer does the community as much, often far more, good by killing bad schemes in their inception, by preventing bad laws from being introduced or passed, by refusing to appoint corrupt or worthless subordinates, etc., as by the things, laws, or officials he positively establishes. In pure science or experimental medicine a negative experiment that is soon forgotten is frequently as important as the positive one that becomes woven into the truth that all recognize. Each is necessary to establish a certainty. In a lay journal the labor concerning contributions refused and the "news" ignored takes up the larger portion of editorial time and energy. We believe we do not exaggerate when we say that by far the most of a medical editor's work never positively shows in his journal. The things for which you have most reason to be grateful are precisely those of which you can have no conception. It is, for example, a pleasure, but none the less a labor, to answer the number of inquirers a day who ask concerning matters not at all connected with the journal. We say it is a pleasure, because the information is difficult for the inquirer to get; easy, generally, for an editor to give; and it is acknowledged that much of the satisfaction of life consists in doing little kindnesses.

The grumblers and scolders have to be reckoned with also; they who write hastily, with prejudice, misinformation, and ill-will. Job was our Sunday-school teacher's model of patience, but Job never edited a medical journal!

It is also to be noted that the writer of a rejected article never quite forgives the poor editor; and some men are so constituted that they will "lay for that man" for many years. And yet, a journal can print only a finite number of articles, and a very large number, for this or many other reasons, must necessarily be returned. The return is no proof that the article has not decided merits, and one may write a kind personal letter in explanation, but the hurt, we fear, too often remains.

Perhaps the most of the unrecognized good an editor does consists in the rejection of subtle temptations. We know, for example, of an instance in which an order for six thousand dollars' worth of journals accompanied the submission of a reputable manuscript, the order being conditioned upon the acceptance of the manuscript. Not a subscriber would have grumbled or would have been the worse or the wiser if the article (which was printed a month later by a rival journal) had been accepted. We know of an editor who traveled over much of the world and lived at first-class hotels, his expenses being paid by "write-ups" in his journal concerning health resorts, with deft paragraphs about railroads, steamships, hotels, etc. The reading notice has a hundred protean disguises, and the expert recognizes the concealed gleam of cunning eyes when the careless see only ingenuous frankness, or, at best, carelessness. The "ethical cranks" are apparently easily laughed out by

the "nobody-knows and the nobody-cares" of the indifferentists. Happily, the fact remains, though opinions differ, and the laughers come and go.

JOTS AND TITTLES

Research and Discovery

Vienna, acknowledged medical center of Europe, offers a synthetic bee sting, claimed to be improved and better than the original, and with the harmful poison removed. This has been developed by Professor Alois Strasser and Dr. Wasserbrenner, of the Vienna Polyclinic Hospital. It has been known for a long time that bee stings are good for some forms of rheumatism, but the difficulty has been that bees will not sting when and where they should, and also that enough sting to have a curative effect puts a quantity of undesirable poison in the patient's blood.

Carbon monoxid poisoning is one of the greatest dangers of modern life. The gas has no odor, is transparent, and gives no ordinary warning of its presence. It is given off by nearly all forms of combustion. There are two symptoms that have been noted which may be valuable. First, there may be a slight swelling and hardening of the small arteries which one can feel in the temples; second, there is often a slight muscular weakness in the back of the legs. In treating a victim, he should not be moved more than necessary and should be kept quiet until recovery is complete; the air should be fresh but not cold. If breathing has ceased, artificial respiration is necessary, but the most important thing is prompt use of a modern inhalation apparatus using oxygen and a little carbon dioxid.

Dr. Warren S. Thompson, director of the Scripps Foundation for Research in Population, claims that we may look forward to a time, possibly not more than thirty or forty years hence, when the number of births in this country will only equal the number of deaths, so that there will be no natural increase. He says that when this condition is realized, children will be relatively about three-fourths as numerous as now and old people will be twice as numerous, or it would be as though we could take about one-fourth of the children of today and transmute them instantaneously into men and women who had passed their fiftieth year. These changes in our population and its rate of increase will necessitate profound adjustment to them of the social and economic institutions.

On April 1, the Department of Agriculture announced that it has been demonstrated in tests made by the Bureau of Home Economics that watermelons are a good source of vitamin A, needed for growth and physical well-being; of vitamin C, the food factor important in nutrition of teeth and other parts of the body; and also contain detectable amounts of vitamins B and G, necessary in stimulating growth and normal development. The experiments were made on the Tom Watson variety of watermelon which makes about ninety per cent of commercial shipments.

A process, proved to be commercially practicable, for manufacturing xylose has recently been developed by S. F. Acree of the Bureau of Standards. Xylose, a sugar made from woody stuff, has been an expensive laboratory possibility for a long time. This new process for its manufacture enables the use of the low-value by-product, cotton seed hull bran, of the cotton seed industries.

Claims made by some distributors of certain kinds of green tea that their product is rich in vitamin C, have been controverted by experiments of the Bureau of Home Economics of the Department of Agriculture. Since green tea is made from the dried, young, tender leaves of the tea plant, many have readily believed that green tea might be a good source of vitamins. The first series of experiments in feeding the tea infusion to guinea pigs has been repeated by the Bureau in order to be sure that the tannin in tea in no way influenced the vitamins. These experiments remove any doubt as to the effect of tannin, but give additional proof that no one of the three samples of tea tested contains an appreciable amount of vitamin C.

Following extensive studies on rats in the laboratories of Johns Hopkins University, Professor W. B. Kouwenhoven, an electrical engineer, and Professor Orthello R. Langworthy, associate in neurology, conclude that alternating current is more dangerous at low voltages than at high voltages. These two scientists insist that the results of their tests on 286 rats cannot be applied directly to men or other animals. One-third of the fatal accidents from electric shock occur on low voltage circuits, although no authentic record has been found of a death on a 110-volt direct circuit. If the skin is moist, 110-volt alternating current house circuits are dangerous, and a current of 100 milliamperes may cause death.

Longer Infancy Is Aim of Education

Dr. Karl G. Miller, professor of psychology and director of admissions at the University of Pennsylvania, who delivered the address at the midyear convocation of the University, held in February, made the following statement:

"Biologically man represents the climax of mammalian development; he not only adapts himself to a complex environment, but modifies that environment to suit himself. A prolonged infancy is the correlate of physical and environmental complexity."

After mentioning an educational system which prolongs infancy by permitting young men and women to remain unproductive until they are well into their twenties, the speaker said, "And so we send our future executives to college, and we insert a three or four year premedical course and add another year of internship, and require a bachelor's degree for admission to law school. And like as not, we then let our young physicians and lawyers sit around for a year or two until they look old enough to be reliable. Only a wealthy nation could permit such a large proportion of its youth to remain nonproductive; only a prosperous nation could make such a glorious investment in the future happiness and attainment of its young manhood!"

One Baby's Thumb had 200,000 Germs

Allowing a baby to suck its thumb not only may lengthen the child's jaw, produce unpleasantly projecting teeth, and so narrow the nasal passages that breathing in later life will be more difficult, but thumb-sucking may result, also, in feeding the baby a dangerous number of germs.

Dr. E. A. Burton, of University College Hospital, London, who recently tested the germ population of ten typical baby thumbs, found an average, he reports, of over 70,000 living germs per thumb, a fair proportion of which may be imagined as finding their way into the baby's mouth when the thumb is sucked. Three of the tested thumbs had more than 200,000 living germs each. "The first instinct in life," Dr. Burton writes in

the *Lancet* (London) in the report of his tests, "and the first desire of an infant is to suck something." Very young infants, however, do not usually select their thumbs as the object to be sucked, that habit being acquired toward the middle of the first year of life, as soon, Dr. Burton writes, "as the way to the mouth has been discovered by the hand." Thereafter the thumb-sucking habit may become more and more firmly fixed; with the accompanying danger of germ infection, the reality of which Dr. Burton's tests have proved.

Dr. Burton did not identify the kinds of germs discovered. Many may have been of harmless varieties, for many kinds of bacteria live continually on the skins of human beings without doing important harm even when swallowed. Also, common sense persons will remember that the human race managed to get along and raise at least a proportion of its babies before anybody knew that germs existed, let alone knowing how many of them live on a baby's thumb. There is no reason, therefore, why civilization is threatened by Dr. Burton's discoveries.

Medicine and the Talking Screen

A recent survey of the medical field by the RCA Photophone, Inc., reveals that many plans of great medical value are under consideration by medical institutions throughout the country. Originally conceived as an entertainment medium, the talking picture has been brought to the service of medicine and science. An excellent illustration of the value of the talking picture to medical education was given by Dr. S. H. Goodhart, of Columbia University, whose first talking film lecture was recently exhibited at the New York Academy of Medicine. He cited an instance when he had to make a trip to Panama to appear before a medical group. Had the film and instruments been available at the time, he could have saved much valuable time and avoided absence from his duties in New York by sending a copy of the film and a projector, to make an appearance for him. The applications of the talking film to medicine are almost unlimited. Medical schools having a library of recorded surgery films will no longer have to arrange their lecture schedules to fit the program of the operating room. Any type of surgical demonstration will be available at any time, accompanied by a complete lecture delivered by the surgeon who performed the operation. Students and members of the profession can see the world's greatest surgeons at work.

In addition to its instructional value to students and members of the profession, the talking film promises to play a revolutionary part in public health campaigns.

Why Recent Graduates in Medicine Should Enter the Army

Captain William L. Wilson, Medical Corps, U.S.A., has grouped under eight headings the reasons for a medical graduate's entering the Army.

Economic. The income of the medical officer, including pay and allowances for quarters and subsistence, is such that with proper care and judgment, he can live a pleasant, educated, respectable life, rear and educate a family in the manner they rightfully should expect, and be at mental ease constantly as to his financial status while practicing his profession. The medical officer automatically has life and disability insurance. Should he die from any cause in line of duty, his dependents are assured of a half year's pay. They are also assured a small monthly pension of $17 to $30 varying with his rank at death, so long as they remain his dependents according to regulations. The medical officer and his dependents have a great economic advantage in buying power through the quartermaster and post exchanges, and are allowed to buy at wholesale prices every needful article through local post exchanges.

Professional. Nowhere can a recent graduate improve on the professional advantages of the Army. Clinical material comes to him from the very day he starts practice, in an abundance that would be the envy of the most ambitious practitioner. He does not have to establish himself. The patients are at hand through no effort of his own. His early work is guided by the helpful and coöperative direction of excellent clinicians and experience second to none in the medical world. He has no competition of a cut-throat nature. Instead he has constantly at his call, willing coöperative consultants, whose main desire is to practice medicine in an expert way, and whose income is the same for his consultation can never advance him financially. It is a practice of medicine, not economics. From the beginning, every modern aid to diagnosis and treatment is at his command without expense to himself. He has for his use, the drugs, instruments, laboratory procedures and devices of every conceivable nature to practice up-to-date medicine. He has at his command either locally or through the Surgeon General's Library the most perfect and complete literature known to modern medicine, in books, journals, etc. There is nothing in print beyond his reach if he needs it, and even small post surgeons' libraries are much superior to the average very successful physician's.

Educational. At all the larger hospitals, clinical conferences, journal clubs, autopsies, and studies by observation and practice by bedside, laboratory, and surgical procedures, offer an unrivaled opportunity for education along medical lines. At smaller hospitals and stations, the lack of specialization allows the medical officer a general medical experience that should encourage even the least ambitious to educational striving. The educational value of stations in every section and climate in the United States and in Alaska, the Philippine Islands, Hawaii, Panama, and Porto Rico, is self-evident. It permits of travels far and wide, and education in geography, races, etc., in no other way available to the doctor or his family. It also allows the medical officer the educational advantage of studying at first hand, diseases peculiar to various climates, regions, and races. The medical officer is allowed time for study, reading, and courses of instruction, both medical and nonmedical, that his civilian colleague can never afford. It is rare that the children of a medical officer will be so placed that the utmost in educational advantages will not be available where schools are considered.

Social. The social activities of the Army are not compulsory to an odious degree to the man with an average amount of the gregarious instinct. As elsewhere the limit is practically controlled by his own desires. He and his family may mingle with college educated, usually graduated, officers and their families, these officers being the choice of the professional, business, and trade world. Among the army officers one finds excellent professional men in medicine, law, engineering, business, finance, aviation, chemistry, modern communication methods, and the actual military man. It is the most cosmopolitan group of educated specialists in the world from which to choose associates.

Patriotic. The patriotic motive, a desire to serve one's country, certainly enters into the discussion, regardless of how lightly it may be treated by some, and

minimized by others. There is a satisfaction in being the "first line of defense" of one's country. For the man who desires a military life, an administrative and executive profession, where a medical background is essential, the Army is ideal.

Recreational. This is a factor seldom found in a civilian doctor's life. In the Army, the doctor is able to follow a hobby, either related to medicine or not. He can be the best professionally and yet have time for the sports he may prefer, for hunting, fishing, riding, travel, and continue to draw his income all the time, with his practice assured him when he returns. He is allowed one month's leave in a year, with pay, accumulated, if desired, up to four years.

Historical. There is no more inspiring page in history than that of the Army Medical Corps, with its achievements, its precedents. What ambitious man could ask for a better place to leave his name permanently carved into the medical world than among the names of the many famous medicomilitary men of the Army? He has the past, the present, and only needs ambition and effort of his own to leave his name for the future.—*The Military Surgeon.*

Finds "Emanation" from Human Body

Dr. Drysdale Anderson, R.C.S. and R.C.P., English officer of health on the West African medical staff, who arrived in America recently to investigate certain problems in malaria and tuberculosis, told of research on an emanation from the human body, resembling tobacco smoke which is visible under certain scientific conditions.

He, with several London medical men, was experimenting with this emanation and the results will be published as soon as the research is concluded. Dr. Anderson described it as a substance resembling tobacco smoke, which envelops the body and streams out of the tips of the fingers like white elastic bands. "I do not wish this matter of emanation to be mixed up with the so-called aura and ectoplasm of spiritualism," said Dr. Anderson. "It is a scientific thing, not guesswork, and founded on scientific observation and not on theory. Dr. Kilmer, who was medical electrician at St. Thomas's Hospital in London, was the first to discover this emanation from the human body, about twenty years ago. Nothing came of his work, however, because of his extraordinary assertions in connection with his discovery, which no one could verify. Quite by accident I became interested in the subject, and last August, in London, I repeated some of Dr. Kilmer's experiments. Much to my surprise, I found there was an emanation from the body, which under certain conditions, was plainly visible. I experimented with my friends and they saw the same thing I did. It was no hallucination. The fundamental idea is to discover what it is. We have been able to prove that it exists and can show it to anybody. A man can strip down to his waist, and under certain conditions he appears to be enveloped in what looks like solid tobacco smoke. I don't pretend to say it belongs to the spiritual. To the scientific mind it must have a natural explanation."

During his stay in the South, Dr. Anderson plans to study how tuberculosis affects the American negro after living in contact with civilization for over 200 years. He said he expected to find them almost as resistant to the disease as the white man. In the backwoods of Africa, he said, among the uncivilized natives, tuberculosis was on the increase and becoming very serious. —*New York Times.*

PUBLIC HEALTH

Labels for Many Mouth Washes to Be Changed.—The Food, Drug, and Insecticide Administration of the Department of Agriculture, has just published the statement that more than nine-tenths of 1000 supposed antiseptic mouth washes have objectionable claims on their labels. Less than one hundred of the mouth washes bore labels to which the government chemists could take no objection. Two preparations actually contained living organisms, and tests on others revealed that many would not kill or prevent germ growth. All unjustified claims have been removed from labels, and to inform the buyer of the unscrupulous manufacturers who attempt to sell fake preparations through extravagant advertising, the Department has issued a booklet entitled, *Fake Antiseptics and the Law*, which tells the truth about the antiseptic lotions, ointments, and powders as found by the government chemists. This booklet may be secured free of charge from the Food, Drug, and Insecticide Administration, United States Department of Agriculture, Washington, D. C.

Trade in Diseased Meat Costly.—The ten men who carried on operations as the United Meat Company of Wilkes-Barre, Pa., failed to comply with the federal law which requires inspection of meat transported from one state to another, were aggregately fined $2950 by Judge Albert L. Watson in the Scranton federal court. These men were charged with transporting uninspected, contaminated, and diseased meat from New York into Pennsylvania. Mr. J. F. Rafferty, of the federal meat-inspection service in New York City, with Dr. E. C. Yoder, of the tuberculosis eradication division of the department commenced a day and night watch as soon as the alleged trucking of inspected meats into Pennsylvania was reported, and early one morning they followed a suspected truckload of meat, and with the coöperation of the Pennsylvania State police, intercepted and seized the truckload of meat which was found to be unfit for food. Of the total 1929 meat production, 66.56 per cent came under Federal inspection. The remainder was composed of the farm kill and commercial slaughter not government inspected.

Asphyxiation Deaths by Natural Gas Decreased by Odorizing Liquid.—To protect the consumer of odorless natural gas from danger of accidental asphyxiation, notable success has been achieved in the odorization of that gas in California. To meet the requirements, the odorant must be nontoxic, noncorrosive, insoluble in water, penetrating, readily available, inexpensive, easily handled, and unaffected by temperature changes and pressure. It must also have an unpleasant but not nauseating odor, and must be consumed completely, and without harmful or unpleasant effects. The Standard Oil Company of California manufactures a substance, Cal-Odorant Oil No. 3 which is being used in the automatic odorizing stations. It is estimated that it will be necessary to install forty of these stations to odorize the gas from the seventeen different fields which furnish natural gas to California. After odorization, the number of leakage complaints from consumers increased in some sections from ten a day to one hundred and sixty.

Federal Survey of School Children.—In a survey on physical defects of school children recently published by the Department of the Interior, Dr. James F. Rogers, of the United States Office of Education, claims that at least seventy-five per cent of the physical defects of school children are present in children of the first grades and many of these defects could be

remedied by following proper medical advice. Dr. Rogers points out that these defects arise from poor heredity, malnutrition, communicable diseases, bad hygiene in the home, and ignorance of child care, and states that: "If we desire a race even relatively free from disease and defects, we must begin our efforts not only before school age but before birth."

National Institute of Health.—A bill, introduced by Senator Ransdell of Louisiana, providing for the establishment of a National Institute of Health, was passed on April 1. This institute shall be under the jurisdiction of the Public Health Service and shall be devoted to scientific researches in the problems of the diseases of man and matters pertaining to health. The bill authorizes the appropriation of $750,000 for the construction and equipment of additional buildings at the present Hygienic Laboratory of the Public Health Service in Washington.

Trachoma Among the Indians.—According to a recent report from the United States Public Health Service to the National Society for the Prevention of Blindness, there is a marked reduction in the incidence of trachoma (the dreaded disease of the eyes which is marked usually by granulated eyelids) among the Indians on the reservations of Arizona and New Mexico. This is explained by the substitution of the ophthalmologist for the native medicine man. Of the 47,000 Indians examined in 1912, more than 24 per cent suffered from trachoma, whereas less than 9 per cent of the 6700 Indians examined in 1928 showed trachoma. It is the policy of the Indian Bureau to use persuasive measures only and to avoid all coercive efforts, which would antagonize the Indian and defeat the aim of the Bureau. The supervisor of nurses for the federal office of Indian affairs says that the successful nurse among the Indians is one who is a successful salesman to overcome the suspicion and distrust of the Indians for gratuitous service from the white man.

Home Pasteurization of Milk.—Dr. Andy Hall, director of the Illinois Department of Health, has recently announced a simple method of pasteurizing milk in private homes. The process has been developed in the research laboratories of the department and requires a thermos bottle, a stove pan, and a thermometer, totalling not more than $3.25. Dr. Hall states that the adoption of the process by families that are unable to secure pasteurized milk, would cause an improvement in health conditions. Such diseases as typhoid fever, septic sore throat, diarrhea, and undulant fever are more prevalent in rural communities and small towns in which pasteurization of milk it impracticable. The home process consists in heating the thermos bottle by filling it with hot water. The milk is brought to a temperature of 145°F. in the pan, then emptied quickly into the heated thermos bottle, covered with a rubber stopper, and allowed to stand in the bottle for one hour. If, after the hour, the milk is cooled quickly, it will remain sweet for several days. Commercial pasteurization plants are supervised by the state department of health. Much of the decline in infant mortality, and typhoid prevalence is due to the pasteurization of milk.

Drug Addiction.—In analyzing drug addiction from the standpoint of causes, Dr. Walter L. Treadway, chief of the Narcotics Division of the Public Health Service, claims that probably bad association and contact with other drug addicts is responsible for 70 per cent; 20 per cent, is the result of painful illness; and about 10 per cent results from a desire for a thrill, experience, or bravado. Because the practice of taking narcotic drugs is usually carried on in secret, it is impossible to ascertain the exact number of drug addicts in the United States. The practice is not limited to any one class of society nor to any one occupation. The use of narcotic drugs, however, is confined to the third and fourth decade of life. The cure and rehabilitation of addicts involve more than the actual withdrawal and physical rehabilitation because their mental rehabilitation is of great importance. Recently, New York and Massachusetts appointed a physician trained in mental medicine as the head of the Department of Correction.

Mortality Rate and Cancer.—The Bureau of Labor Statistics has recently issued the statement that during 1929 there was a continued improvement in general health conditions in the United States and in Canada. The death rates for tuberculosis and typhoid fever were the lowest yet recorded, and the mortality from measles and diphtheria was further reduced. There was an increase in the deaths from organic heart disease, cancer, diabetes, and from automobile accidents. There has been a slow, persistent increase in the cancer death rate, and there is no evidence of a significant decline in the death rate for cancer of any one organ or part of the body. Dr. Joseph C. Bloodgood, of Baltimore, estimates that the total number of deaths from cancer per year is 120,000. The cause of cancer is still undiscovered and it is hoped with help from the federal government, that more facts on this problem can be obtained.

Record for Philadelphia.—According to Director of Public Health, Dr. A. A. Cairns, Philadelphia has established the lowest death rate from diphtheria of four of the largest cities of the country. The death rate from diphtheria in New York is twice as great as that of Philadelphia; Chicago, four times as great; and Detroit, five times as great.

Morbidity in Pennsylvania in January, 1930

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Aliquippa	8	2	0	0	23
Allentown	9	3	19	1	21
Altoona	4	17	12	0	19
Ambridge	0	0	0	0	0
Beaver Falls	0	1	3	0	1
Berwick	0	0	0	0	0
Bethlehem	4	3	21	1	8
Braddock	5	0	6	0	11
Bradford	2	1	4	0	22
Bristol	7	41	9	0	1
Butler	2	257	5	0	15
Canonsburg	1	0	1	0	0
Carbondale	4	0	0	0	0
Carlisle	1	1	2	0	0
Carnegie	3	0	6	0	3
Chambersburg	0	0	2	0	3
Charleroi	1	4	4	0	0
Chester	4	1	2	0	0
Coatesville	4	1	3	0	0
Columbia	1	0	0	0	2
Connellsville	2	0	3	0	1
Dickson City	0	0	0	0	0
Donora	1	0	0	0	2
Dubois	1	1	1	0	0
Dunmore	9	1	0	0	0
Duquesne	4	0	10	0	0
Easton	4	0	22	1	1

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Erie	3	6	15	2	14
Farrell	0	10	1	0	2
Greensburg	0	0	1	0	5
Harrisburg	3	3	58	0	24
Hazleton	39	1	5	0	6
Homestead	12	2	4	0	0
Jeannette	1	0	0	0	0
Johnstown	1	21	9	0	72
Lancaster	1	7	10	0	39
Lebanon	3	0	19	0	3
McKeesport	19	1	10	0	7
McKees Rocks	3	3	2	0	0
Mahanoy City	0	0	0	0	5
Meadville	0	12	4	0	3
Monessen	30	3	3	0	0
Mount Carmel	1	0	0	0	0
Nanticoke	0	0	2	0	0
New Castle	1	28	1	1	2
New Kensington	1	1	8	0	0
Norristown	5	1	8	0	7
North Braddoek	2	0	4	0	1
Oil City	0	0	12	0	20
Old Forge	1	0	1	0	0
Olyphant	0	0	0	0	0
Philadelphia	111	97	469	8	116
Phoenixville	0	1	5	0	12
Pittsburgh	99	275	129	4	136
Pittston	8	4	0	0	2
Plymouth	2	1	0	0	0
Pottstown	5	0	2	0	2
Pottsville	9	0	0	0	3
Punxsutawney	0	0	0	0	0
Reading	8	6	29	0	112
Seranton	17	3	33	1	8
Shamokin	3	0	3	0	6
Sharon	1	14	8	0	4
Shenandoah	5	0	0	0	0
Steelton	0	1	6	0	1
Sunbury	2	2	2	0	0
Swissvale	1	2	1	0	2
Tamaqua	1	3	0	0	0
Uniontown	0	17	7	0	17
Warren	0	0	2	0	2
Washington	2	48	2	0	5
West Chester	0	1	7	0	15
Wilkes-Barre	11	3	39	0	16
Wilkinsburg	2	3	7	0	11
Williamsport	2	77	4	0	24
York	0	68	9	0	2
Total Urban	496	1059	1076	19	839
Total Rural	422	2057	1201	49	1099
Total State	918	3116	2277	68	1938

Morbidity in Pennsylvania in February, 1930

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Aliquippa	0	0	0	0	0
Allentown	5	4	13	1	26
Altoona	5	25	14	0	26
Ambridge	0	0	0	0	0
Beaver Falls	5	0	4	0	2
Berwick	0	0	0	0	0
Bethlehem	3	0	13	0	3
Braddock	1	1	2	0	14
Bradford	0	2	3	0	23
Bristol	4	50	3	0	11
Butler	0	175	4	1	7
Canonsburg	0	2	1	0	0
Carbondale	0	0	5	0	0
Carlisle	0	1	0	0	1
Carnegie	4	7	3	0	1
Carrick	0	0	0	0	0
Chambersburg	0	0	2	0	0
Charleroi	0	2	2	0	0
Chester	2	2	4	0	0
Coatesville	0	2	3	0	1
Columbia	1	0	0	0	5
Connellsville	0	1	1	0	0
Dickson City	0	0	0	0	0
Donora	0	1	0	0	1
Dubois	0	2	1	0	0
Dunmore	0	2	0	0	0
Duquesne	2	0	11	0	0
Easton	2	6	15	0	0
Erie	3	2	2	5	53
Farrell	0	1	4	0	0
Greensburg	0	3	1	0	0
Harrisburg	1	6	35	0	24
Hazleton	19	2	4	0	2
Homestead	3	10	4	0	0
Jeannette	0	0	0	0	0
Johnstown	3	12	10	0	74
Lancaster	3	20	7	0	15
Lebanon	1	0	16	0	2
McKeesport	1	4	9	0	7
McKees Rocks	1	0	0	0	0
Mahanoy City	0	0	0	0	0
Meadville	0	20	0	0	20
Monessen	16	0	0	0	0
Mount Carmel	0	0	0	0	0
Nanticoke	0	1	0	0	0
New Castle	3	48	2	0	8
New Kensington	0	1	1	0	0
Norristown	1	5	1	0	4
North Braddock	2	1	3	0	1
Oil City	0	0	2	0	4
Old Forge	0	4	0	0	0
Olyphant	1	0	0	0	0
Philadelphia	100	233	563	2	115
Phoenixville	0	0	1	0	3
Pittsburgh	74	424	114	1	174
Pittston	3	2	0	0	0
Plymouth	1	0	1	0	0
Pottstown	1	0	3	2	2
Pottsville	5	0	0	0	1
Punxsutawney	0	0	1	0	0
Reading	5	3	14	0	90
Seranton	7	3	13	0	2
Shamokin	10	1	1	0	0
Sharon	0	52	6	0	4
Shenandoah	5	0	0	0	0
Steelton	0	0	1	0	0
Sunbury	0	0	0	1	0
Swissvale	0	0	1	1	12
Tamaqua	0	1	1	0	0
Uniontown	1	40	7	0	13
Warren	0	3	0	0	0
Washington	1	91	0	0	15
West Chester	0	0	3	0	11
Wilkes-Barre	8	2	54	0	5
Wilkinsburg	6	2	22	0	8
Williamsport	4	92	5	0	21
York	0	159	9	0	6
Total Urban	323	1533	1025	14	817
Total Rural	317	1896	1110	39	916
Total State	640	3429	2135	53	1733

PHYSICAL THERAPY

Diathermy Electrodes

The electrodes for medical diathermy used in this country are usually 18 to 22 gauge block tin or Crooke's metal, cut to the size and shape desired.

Considerable controversy has recently developed concerning the use of pads soaked in salt solution, which are inserted between these metal electrodes and the skin. In England, it has been almost the universal custom to use such pads, which are often made of chamois. In France and in the United States, the bare metal electrodes are practically always used, the contact surfaces usually being moistened with soap suds. A notable exception is at the Mayo Clinic, in which it has been the custom for some time to use quilted pads of cotton and gauze, soaked in salt solution, beneath the metal electrodes.

They point out that: A pad saturated in salt solution under the diathermy metal lessens the danger of burns by causing better contact; there is less restriction of the parts treated; the pad gives room for the part to dilate and it is a better conductor; and, the salt pad draws moisture from the skin, eliminating frequent resetting and permitting any length of treatment without the drying of the pad.

They give the following instructions: Quilt the pads to prevent uneven distribution of the cotton; dip in saturated salt solution; wring tightly so as to eliminate uneven distribution of the water; the area of the electrode should be smaller than the area of the pad; and, inspect all pads before the light previous to using.

W. J. Turrell, of England, favors the use of wet pads and states: "The main advantages of the pads are that the current can be more evenly applied over bony surfaces and that the underlying skin is more uniformly heated."

On the other hand, no less an authority than Bordier, of France, after many experiments, states that: "The diathermic current of d'Arsonval ought to be applied by means of metallic and *not* by wet electrodes." Wet pads frequently moisten the patient's clothing.

We have noticed, however, that if salt solution pads are used, the skin is uniformly pink and there is no rim of reddening, as is sometimes seen when metal electrodes are applied directly to the skin.

It is probable that the use of pads is a little nicer than the application of bare electrodes. Nevertheless, we doubt whether the additional expense and the waste of time necessary to prepare these pads are justified.

The use of saline pads, therefore, may be considered as a refinement of treatment, presenting certain advantages over the use of bare electrodes, but which is rather costly and time wasting, and which is certainly not essential for good skin penetration.

A good plan would be for the physical therapist to follow the suggestion of Turrell and try both methods on himself, and then decide which method he desires to use.

Electrosurgery in Gynecology

In general surgery, the field for the new agent electrosurgery is a wide and most beneficent one, adding enormously, in some of his most difficult fields, to the efficiency of the surgeon and his delight in his work. In gynecology, it is an indispensable agent for the following reasons: (1) It is far cleaner than are previous methods and sterilizes as it proceeds. (2) It is a working-at-a-distance knife and fork procedure, as it avoids all handling of the structures. (3) It checks the hemorrhage of the smaller vessels and gives a better continuously visible field. (4) An active hemorrhage can usually be checked at once by catching the vessel delicately and turning on the current, which seals it effectively. (5) Ligatures are largely avoidable, in this way saving much time. (6) Nice work can often be done at a distance, say, deep in the pelvis, as easily as near the surface. (7) *Pari passu* as the operation proceeds the lymphatics are sealed. (8) It is invaluable in destroying any lingering infected area or disseminated malignant growth which cannot be dissected out. (9) As a method of doing a refined dissection, it is admirable. (10) If we had always been accustomed to depending on electrical surgery and some iconoclast were to invent the scalpel, ligatures and sutures with their oft-accompanying manipulations of the tissues, we would at once reject these novelties as being markedly inferior in every way, enhancing the risks of mortality and of morbidity to the patient. Where usable, this method is as much ahead of scalpel surgery as our powerful modern electric engines are ahead of Richard Trevithick's and George Stephenson's locomotives.—Howard A. Kelly, M.D. (Baltimore, Md.) in *J. A. M. A.*

Electrosurgery

Electrosurgery is making rapid strides as its advantages are becoming more manifest. In the United States, Kelly has been one of its foremost protagonists. He points out that this method destroys tumors *in situ* by necrobiosis, prevents hemorrhage, and obviates the use of ligatures and the handling of tissues; the field of operation is reduced, complications are lessened and there is no interference with primary union. Recurrences of malignancy are easily dealt with. Kelly says that: "The preparations for an electrosurgical operation, surrounded by all the necessary precautions for securing and maintaining a well-sterilized wound, are often not so extensive and time consuming as for an average general surgical procedure, nor does this newer procedure entail the anxious after care or anticipation or disagreeable sequalæ." Kime points out that electrosurgery is especially valuable in premalignant and malignant conditions; it is quickly performed and may be done under local or regional anesthesia; postoperative pain and shock are absent; the blood loss is slight and there is no scar. Heitz-Boyer shows that with this method there is a primary hemostasis of the small vessels and a secondary hemostasis by coagulating products set free in the circulation by the alteration of cells by the high-frequency current. Walker shows the advantages of electrosurgery in circumcision.—*Medical Times.*

Electrosurgical Method of Closed Intrapleural Pneumolysis in Artificial Pneumothorax

Matson's experience with the electrosurgical method has given him confidence in this method of cutting adhesions. Control of bleeding is the most dangerous problem and requires thorough knowledge of the character of the currents used. Electrosurgical cutting is accomplished without heat or smoke to disturb the view. There is a minimum of tissue reaction afterward, and while more complicated and technically more difficult than the galvanocautery method, it is without doubt a notable advance in this branch of surgery.—*J. A. M. A.*

The Physical Therapy Technician

To the Editor: Terminology in The Journal is uniformly as accurate as the titles of its articles are descriptive—so much so that one hesitates to question either of these did not an exception sometimes happen

to prove the rule just given: The writer's attention has been called to the paper on "The Physieal Therapeutist and the Postural Patient," by Olive Robinson, Hartford, Conn. (THE JOURNAL, Aug. 24, 1929, p. 578.) The American Medical Directory does not mention a medical graduate of that name in Hartford, the inference being that the author of the otherwise excellent article is a physician's lay assistant. One therefore questions the propriety of her assuming the title of physical therapeutist.

Three years ago, when the carefully prepared medical practice act was about to be adopted by the state legislature, New York physicians strenuously objected to insertion of a clause by which laymen could be designated as "physiotherapists." The contention was that such use of the term would deceive an otherwise uninformed public—the suffix "ist" usually indieating a medical graduate—as otologist, neurologist, psychiatrist.

Failure to prevent addition of the harmful clause has led apparently to the beginning of another cult by imperfectly trained laymen that intrudes on the field of the educated physician. Although legally able to function only under the supervision of medical practieians, these licensed physiotherapists earry on in so-called institutes, beauty parlors, bath concerns and like commereial places whose medical direction may readily be doubted.

This serious situation was one reason, I believe, for discarding the special title of physiotherapist or physiotherapeutist by medical practicians and substitution of physical therapist or physical therapeutist as meaning a medical graduate who adds physical methods to his other treatment resources; also, for his specially trained nonmedical assistant to be known henceforth as a "physical therapy technician," the same as a clinical laboratory teehnician, an x-ray laboratory technician, and the like. The distinction is an important one. See "Report of Committee on Present Status of Physieal Therapy" in THE JOURNAL, Oct. 16, 1926, p. 1302.

The purpose of this letter, then, is to ask general adoption of the changed nomenclature by the profession.

A. B. HIRSH, M.D., New York.

The above letter from the eorrespondence column of the *Journal of the American Medical Association* is of considerable interest.

The question of physical therapy *vs.* physiotherapy has been discussed in this column (see issue for October, 1929, p. 33) and we heartily endorse Dr. Hirsh's proposed change in nomenclature.

HOSPITAL ACTIVITIES

The Patient's Record—*Continued*

The *progress record* is a very important part of the patient's record, not only for the value to the patient during his stay in the hospital, but also for the very valuable data thus accumulated for detailed study of a series of cases. As valuable as this record will prove, it receives the least consideration, and very frequently the notations are ridiculous and absolutely of no value.

The daily progress record is of value not only for the data accumulated, but for the instruction on daily observation afforded to interns. Unless the chief bears these two factors in mind, he is signally falling down on two counts, as related to the daily progress record.

As a suggestion: After an abdominal section, nausea and vomiting, degree, pain, character, and location; distention, local, general, or absence; pain on palpation, location; signs and symptoms leading one to suspect shock or hemorrhage; if a temperature rise, probable or known cause; conditions leading to recognition of other postoperative complications; notations of examination of ehest with the findings; when dressings are removed to inspect the incision or search more fully for incisional complications and record the findings; if there is gauze or tube drains, the color, odor, and relative amount of drainage should be noted. The removal of a portion of, or all, drains should be duly recorded. When nonabsorbable sutures are removed, the number removed at a time should be recorded, and when the final sutures are removed, so specify. If they are all taken out at one sitting, state "all sutures removed."

After an inguinal hernia operation: Pain, or absence of, in testicle on affected side; if testicle shows on palpation daily for first few days any evidence of constriction in the operative field. In other words, intelligent daily notations should be made either postoperative or otherwise, of conditions that would ordinarily be expected in the existing conditions for which the patient is under treatment, bearing in mind to record any complications. The negative phase at times is just as important as the positive findings, if not more important.

It is surprising the number of approved hospitals that ignore the daily progress record.

It is of interest to note the senseless records made daily by the intern. Either the chief does not read the progress record, or if he does so, he ignores it.

It is not uncommon to see the following notations, often in instances of acutely ill patients: "Pulse and temperature normal" (which is readily seen on the temperature record); "general condition same as yesterday"; "no complaints." This may be true, yet valuable physieal findings may have been overlooked.

It is most exasperating to note the lack of value of the daily progress records through the carelessness and indifference of the chief and his intern. Frequently there will be found in the nurse's record, facts regarding which the intern seemed to have no knowledge, and naturally has a far away look when he is questioned in regard to it.

We cannot emphaszie too strongly the need for intelligent daily progress records, to keep the chief and his intern on edge, in the efficient daily observation of the patient.

Flowers in the Sleeping Room.—Referring to the practice of removing plants from bedrooms at night, Dr. A. F. Woods, director of scientific work in the Department of Agriculture, has recently made the statement that flowers are beneficial rather than harmful in hospital and other sleeping rooms. In many hospitals it is a common practice to remove all flowers and plants from the rooms at night, because it is thought that they are in some way injurious to the patient. Instead of being harmful they are beneficial, giving off carbon oxygen and moisture and sorbing carbon dioxid. The only occasion for removing plants and flowers from sleeping rooms is in the ease of poisonous plants and in cases of patients who suffer from hay fever, and in this event they should not be in the room at any time.

Hospital Day.—Facts about nursing education and nursing service will be presented by hospitals with schools of nursing in connection with National Hospital Day, May 12, according to information reaching Dr. J. R. Morrow, chairman of the National Hospital Day Committee, American Hospital Association. Aside from the fact that the public, the purchaser of nursing service, has the right to be informed of the quality of that

service, there is another excellent reason for mentioning nursing on May 12. It is the birthday anniversary of Florence Nightingale, and therefore, almost literally, the birthday of modern nursing.

Practical Nurse.—The following is a letter and answer which appeared in the *Philadelphia Inquirer,* the contents of which may be of interest to many of our readers:

"Is there any license or fee required before one can advertise as a 'male practical nurse and companion'? I have had ten years' experience in practical nursing as a hospital orderly." Subscriber.

Helene S. Herrmann, secretary-treasurer of the State Board of Examiners for registration of nurses, of the State Department of Public Instruction, says: "There are but two legally recognized groups caring for the sick. One group comprises the graduate, registered nurse, who has met all of the requirements of the Act of Legislature of 1927. The other is the licensed attendant for whose training provision is also made in the above-mentioned act. The terms practical nurse and hospital orderly are not mentioned in the act, they are purely colloquial expressions and carry no recognition of formal preparation. Since there is no legally recognized group into which the questioner would fall, there would be nothing to prevent his caring for the sick and inserting the advertisement in question. He would come into legal difficulties if he were to represent himself to be a graduate nurse, a registered nurse, or a licensed attendant."

MEDICOLEGAL NOTES

Construction of Statute Prohibiting Division of Fees Without Consent of Patient.—The Tennessee Legislature has enacted laws for the licensing of physicians and prescribed rules of conduct for their guidance thereafter. It has also made it unlawful to divide or agree to divide fees with any person without the knowledge and consent of the person paying the fee. But, the Tennessee Supreme Court holds, Henderson v. Knoxville, 157 Tenn. 477, soliciting practice from and in fact dividing fees with other physicians does not come within the prohibition of these statutes. And violation of these statutes by a physician is not covered by a charge of soliciting practice from physicians and offering to divide the fees with them. Such charges were preferred against a physician practicing in a city hospital and held sustained, but the physician testified that he never solicited patients directly and never divided fees with the physicians who brought a patient to him without the consent of the patient. The court held that he was entitled to a decree restraining the officers of the hospital from interfering with him in the practice of his profession in the hospital. The court said: "The defendant (complainant) was not charged with violating either of these statutes, and so long as he stays within the law he has a right to practice in the public hospitals of the state; provided, of course, that he conforms to all reasonable rules and regulations of the institutions. But neither the city nor the hospital authorities can prescribe rules or regulations that contravene or conflict with the state laws. It is otherwise when it comes to private hospitals; and voluntary medical societies and associations can discipline a member who violates their rules of conduct in such manner as they see fit. If the medical profession feels that the good of the order demands more stringent regulations, then the remedy is legislative and not judicial. To empower a manager of a hospital to refuse a physician admittance or to expel him, if his conception of professional conduct does not comport with his own, would be a dangerous thing. A physician might be in today and out tomorrow, depending upon the whim of the individual who happened to be manager."—*Medical Journal and Record.*

Illegal Practice.—What the words "Illegal Practice" mean to you depends upon your point of view. The society receives complaints that car cards in the subway are offers of illegal practice in their advocacy of foods, methods of procedure, and the like. Others complain that the circularization of the profession by laboratories offering service with or without commissions come within the category. Others again talk about abortions as illegal practice. In one instance it is the prostituting of the desire for health; in another it is ethics; and in another it is the performing of a criminal act.

The Committee on the Illegal Practice of Medicine of the Society has considered many of the problems of cultism, charlatanism, quackery advertising institutions, fake cures, and many other procedures. Many fall in the category, depending upon whether or not a diagnosis is made and a remedy applied. The difficulties confronting the authorities responsible for the enforcement of the Medical Practice Act are great. The obtaining of evidence is difficult. Coöperation necessary between various groups, organizations, governmental agencies and individuals must be wholehearted, if progress is to be made in protecting the community against the illegal practice of medicine.

At a recent meeting of the Committee on Illegal Practice the method of procedure to be followed was reconsidered and the committee conferred with the Secretary of the State Board of Medical Examiners, Dr. Harold Rypins. As a result of this meeting there was a much clearer understanding of the work being done; a much more thorough appreciation of the difficulties under which it is done; and there was devised a plan of coöperation which will accomplish, among other things, the shortening of the time between the receipt of a complaint by the society and its receipt of action by the authorities. Also arrangements were made whereby the committee would be kept more thoroughly informed of the action being taken.

Without the assistance of the individual practitioner and without the willingness of the practitioner to permit the confidential use of his name, the fullest coöperation cannot be given. Any physician whose patient complains to him of procedures that involve the illegal practice of medicine, and whose patient is willing to carry through with the complaint, is requested to inform the committee in writing of the circumstances in as concrete and definite a manner as possible.—*Bulletin of the Medical Society of the County of Kings (N. Y.).*

Missouri Opinion Upholds Revaccination Regulation.—The assistant attorney general of Missouri, in response to an inquiry of the health commissioner of that state, has rendered an opinion that a local health commissioner of Missouri has the right to issue an order requiring all school children who have not been vaccinated for five years to be revaccinated, and if they should fail to comply, they may be excluded from schools and public gatherings.

Loss of Taste and Smell Senses Compensable.—Because she lost her senses of taste and smell, a cook was awarded $22,500 on April 7 by Justice McGeehan, New York. The verdict was against a millionaire. The cook, according to testimony, was walking with her sister and niece when the defendant's automobile struck them.

INDUSTRIAL MEDICINE

Maine Disallows Occupational Claim.—An occupational strain caused gradually by constant use of the fingers in gripping objects in exactly the same way, and resulting in incapacity to work, has been held by the Maine industrial accident commission not to be an accident. The commission holds that the injury was not the result of an unusual, undesigned, unexpected, and sudden event, and therefore, not an injury by accident as required for compensation.

Compensation Status of Minor.—The Supreme Court of Pennsylvania has declared that illegally employed minors were not eligible to the benefits of the Workmen's Compensation Act. This court is of the opinion that to recognize illegal contracts and give them the force and effect of legal contracts, so far as civil liability of injuries to minors is concerned, would trend to encourage the practice which the statute has declared illegal. In the event of an injury, the employer would suffer no more in the case of an illegal than of a legal employment. Therefore, a minor thus illegally employed is relegated to an action of trespass for personal injuries received during his employment. This decision of the court is to protect the youthful worker and to penalize the careless or unscrupulous employer.

Accident After Day's Work.—The Montana Supreme Court has held that injuries sustained after the day's work is finished, though incurred on the employer's premises, are compensable. An employee of the state nursery greenhouses was struck by an automobile and suffered a broken leg, as he was leaving the nursery property.

Ruling in Case of Workman Who Had Free Operation.—The State Workmen's Compensation Board of Pennsylvania has recently affirmed an award of a referee for compensation under the Workmen's Compensation Act for the recurrence of a hernia which an employer had previously allowed to be corrected. The board granted that the claimant's accident put him in no worse disability than he was in before he accepted the gift of medical and surgical aid from his employer. The accident, however, did not exist when the claimant went to work on the morning of the accident. Therefore, the board must recognize the accident even though the practical result will be to discourage such humane offices as the defendant extended the claimant, and may result in a still greater restriction of opportunity to procure employment by men who are disposed to hernia or other conditions that might be aggravated.

Physicians and Dentists Business Bureau

According to the *Lycoming County Medical Bulletin*, March 1 marked the formal opening date of the Physicians and Dentists Business Bureau of Williamsport, Pa., which has as its object the collection of delinquent accounts, the credit rating of the laity, and the financing of accounts through a local banking institution, a service in general which should usher in a new and better era in medical economics for the physician who becomes a part of the organization and uses its facilities to advantage.

Those who have been instrumental in advancing this project have secured the advice of a successfully-conducted similar bureau in Memphis, Tenn. The offices of the bureau are under the supervision of two experienced commercial credit managers who have worked in that city successfully for a considerable time and are thoroughly familiar with local conditions. The plan adopted and outlined is working successfully in other cities. It offers a better competition to the installment buying methods of the commercial world which has worked considerable havoc to the collections of physicians' accounts by the ordinary means of sending statements. It puts emphasis on the necessity of meeting the financial obligations of sickness. It puts the physicians' account on a par with the industrial account, and should in every way improve the economic welfare of the physician which in turn will make more possible his scientific advancement, for it is generally recognized that our economic welfare materially affects our scientific attainments as individuals, particularly where finances are an important factor.

Why Organize an Auxiliary

In the December number of the *Journal of the Iowa State Medical Society* is a very interesting article under this title by Mrs. Frederick G. Murray, secretary of the woman's auxiliary of that state society. We quote the following, more especially for the attention of our members (the genus homo):

Doctors like to take their wives to the state convention—perhaps because they see so little of them at home.

Since acquiring suffrage rights, women have become a more powerful factor in modern life—taking a new place by their husbands in all lines. Perhaps doctors should see that some of this public influence of their wives is applied to their own profession.

In most professions or lines of business, the wives have been expressing themselves. The minister's wife has always been appropriated by his congregation; lawyers, politicians, diplomats, college professors gain public favor through the social graces of their wives. Auxiliaries have long been popular in the government offices as well as the various veterans and fraternal organizations.

Up to this time the doctor has not used his wife in any public way. Her efforts in his behalf have been confined, for the most part, to answering the 'phone, keeping meals warm, observing a discreet silence about his patients, and making a cup of coffee in the night.

There are many ways in which this leadership might be used for the benefit of the medical profession. The following is a suggestion: Many doctors' wives are already serving on the health committees of the various state organizations such as the Legion Auxiliary, P. T. A., Farm Bureau, Red Cross, and The Federation of Women's Clubs. Our president, Mrs. M. Nelson Voldeng, Woodward, Iowa, is state chairman of health in the last named organization. These women on the various committees might be appointed to serve on a health committee for the Medical Auxiliary but functioning mainly on the health committees of the other organizations, seeing that a proper ethical tone is maintained in the public health work of the state.

The medical profession is changing; there is need for the combined leadership of the doctors and their wives to help in determining public opinion. Until recently the doctor and his work has been individualistic and isolated; now it is found that in order to establish modern medicine, the doctors have to stand together in an organized way, in hospital staffs, medical societies, and clinical groups. It is suggested that doctors' wives may have a part to play in organized medicine by helping to gain for the profession the support of public opinion.

Tuberculosis Abstracts

A Review for Physicians

PREPARED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Published through the coöperation of the Pennsylvania Tuberculosis Society and the Medical Society of the State of Pennsylvania

PROPOSALS for the treatment of tuberculosis by some form of nutritional therapy reappear periodically. Recently, the regimen devised by Gerson, based on the studies from Sauerbruch's clinic in Munich, has attracted the attention of physicians and laymen, largely through incomplete press reports of a "salt-free diet." Edgar Mayer, of Saranac Lake, was privileged to visit Sauerbruch and Gerson's clinic to observe their dietary methods. Upon returning to this country, Dr. Mayer and his associates, with the assistance of Frau Jungklaus who received her dietetic training in the German clinic, applied the method to a group of thirty patients. The results are reported in the *Journal of the American Medical Association,* December 14, 1929, from which the following abstracts are derived.

Basic (Vitamin) Feeding in Tuberculosis

The diet in advanced tuberculosis should be of a caloric value sufficient to cover the metabolism (increased by the toxemia especially) as well as the atrophy induced by the disease. But the pulmonary mechanism should not be burdened by an excessive caloric intake. Fifty calories per kilogram is the optimum. Theoretically, the protein intake should be increased, but this accelerates metabolism and hence prevents pulmonary rest. On a 3500 calorie diet, a daily intake of 100 grams of protein will maintain a tuberculous patient in positive nitrogenous equilibrium.

Gerson Diet is Base-Forming

Fulfilling the caloric requirement is not enough, for the wasting in tuberculosis involves a corresponding demineralization. The Gerson diet makes good this deficiency by including base-forming solids. The German physicians seem to be confused about the acid-forming and base-forming values of the dietary, but Mayer states that "an analysis of the diet reveals definitely its base-forming nature." Sodium chlorid is excluded because it favors tissue hydration, which is already excessive in tuberculous processes. The most significant feature of the dietary is that it is rich in vitamins A to G, and this constitutes a specific advance in this particular form of dietary treatment of tuberculosis. A sample diet for one day is shown in the table.

Mayer observed in the German clinics "definite

Rats fed on acid-forming (left) and base-forming (right) diets,

healing in advanced cases of lupus vulgaris of the face and mucous membranes that had previously been resistant to all other accepted forms of treatment. These results seemed far more striking to us than those claimed for the other forms of tuberculosis, which included tuberculosis of the bones and joints, lymph nodes, lungs, peritoneum, and genito-urinary tract, both with and without sinuses." Lupus is a prevalent complication in European countries, while in the United States it is relatively rare.

Diet Tested in United States

Upon returning to this country, Mayer selected thirty patients who had failed to respond to ac-

Sample Diet for Tuberculosis Patient for One Day

3500 calories; 70 kg.; 1 gm. per kg. of body weight; basic, 40 c.c.

7 a. m.		
Oatmeal	4 T	1⅔ oz.
Sugar	1 T	½ "
Cream	2 T	1 "
8 a. m.		
Br. tomatoes	1	3⅓ "
Stale bread	1 sl	1 "
Sweet butter	2 pats	⅔ "
Cream cheese	1" cube	½ "
Honey	1 T	½ "
Milk	1 C	8 "
11 a. m.		
Lemon juice	½ C	4 "
Sugar	2 T	1 "
Egg yolk	1	⅔ "
Butter	1 pat	⅓ "
Crackers	2	½ "
1 p. m.		
Veg. soup	1 C	8 oz.
Potato	1	5 "
Peas	Serv	3⅓ "
Carrots	Serv	3⅓ "
Lettuce	Serv	1⅔ "
Mayonnaise	1 T	½ "
Bread	1 sl	1 "
Butter	2 pats	⅔ "
Milk	1 C	8 "
4 p. m.		
Cocoa	1 C	8 "
Bread	1 sl	1 "
Butter	1 pat	⅓ "
6 p. m.		
Rice	2 T	1 oz.
Lettuce	Serv	1⅔ "
Cheese	1" cube	½ "
Bread	1 sl	1 "
Butter	1 pat	⅓ "
Milk	1 C	8 "
8 p. m.		
Oatmeal	4 T	1⅔ "
Sugar	1 T	½ "
Cream	2 T	1⅓ "
Almonds		⅓ "

In addition, the patient receives one tablespoon cod liver oil three times daily, much fruit between meals and about five grams of meat weekly.

cepted therapeutic measures for two or three years. Of these, ten were excluded before the end of the six months' period for various reasons. The twenty patients who completed the experiment showed a substantial gain in weight which it had been impossible to attain by previous procedures. Many of the alimentary disturbances, which had persisted on other diets, cleared rapidly with this regimen. The diet was well tolerated except in two instances. It was effective in diminishing fatigue and induced a sense of well-being. The slight elevation of temperature disappeared in a few cases.

In about one-third of the cases, physical and roentgenologic examinations of the chest showed definite clearing, with an occasional contraction of a cavity. The other patients did not show any marked changes. The quantity of sputum diminished considerably in about half the cases, but in none did it become negative for tubercle bacilli. A few of the patients showed marked diminution of cough. Hemorrhages occurred in some during the experiment as well as before. Chest pains disappeared in a few who constantly complained of this symptom before. Two cases of intestinal tuberculosis which had resisted other therapeutic procedures cleared up clinically, and the roentgenologic filling defects of the colon disappeared; one remained unchanged.

Experiments on Rats

The author cites also chemical and nutritional studies in two groups of albino rats to determine the effect of acid- and base-forming diets on the blood, bones, and metabolism. Compared with the rats on the acid-forming diet, those on base-forming diets gained markedly in weight, their bones were larger, firmer, and nonrachitic, their muscular tone was better, they were more vigorous, their appetite was keener, they did not succumb to infection as easily; in short, the general metabolism and well-being was superior.

Dr. Mayer realizes that his preliminary study of human patients permits of no dogmatic statement because the group was distinct from those of the German clinics, where more favorable results were observed, and because of the difficulty of clinic control; the only means being the selection of patients who failed to respond to accepted therapeutic measures for two or three years. The favorable results in about one-third of the patients studied for a period of six months of careful supervision may perhaps be attributed to the effect of the dietary. But critical clinicians may justly maintain that contributory factors other than diet were operative in the end-result. The psychic element, the enforced rest, the occasional tendency of the disease to subside spontaneously, the wholesome food, its scrupulous preparation and careful cooking, and the individual service are factors that must be considered in a final analysis.

Importance of Vitamins

Mayer believes that the inorganic constituents, whether acid-forming or base-forming, are not as important as the vitamin content of the dietary. Such foods as milk, vegetables, and fruits are rich in vitamins and are base-forming. These two factors regulate cellular metabolism, and the utilization of minerals depends on the simultaneous presence of vitamins in the alimentary tract.

Extravagant and unwarranted claims have been made for the Gerson diet but it is certainly not a cure for tuberculosis. In isolated cases, it may be of value but only as an aid to the accepted routine treatment whose mainstay is still rest.

THE MEDICAL SOCIETY
OF THE
STATE OF PENNSYLVANIA

Officers' Department

WALTER F. DONALDSON, M.D.
Secretary
8063 Jenkins Arcade Bldg.,
Pittsburgh, Pa.

CONTRIBUTIONS TO MEDICAL BENEVOLENCE FUND

The Committee on Medical Benevolence gratefully acknowledge the following contributions to the Fund:

Woman's Auxiliary to Lehigh County Medical Society	$100.00
Woman's Auxiliary to Butler County Medical Society	25.00
Dr. F. B. Utley (Allegheny County)	25.00
A Friend (Allegheny County)	5.00

AMENDMENTS TO THE CONSTITUTION

Proposals for amendments or alterations to the Constitution of our Society, if offered during the interim between annual sessions, must be sent to the Secretary of the Society at least four months before the next annual session, and must be published in the JOURNAL at least three months in advance. The Official Call for our next annual session, which will be published in the June number, should include all proposals for amendments or alterations. Same should be mailed so as to reach the Secretary's office not later than May 23.

PAYMENT OF 1930 DUES

On April 24, 1930, 7497 members of the various component societies had paid their 1930 dues to the State Society; on the same date of the previous year the dues of 7452 members had been paid.

The following figures show the number of members of each of the component societies who were in good standing on April 24th. Such splendid results can be obtained only by diligence and faithful effort on the part of the officers of these various societies, especially the secretaries.

County Society	*Total No. of Members*	*Members Paid (April 24, 1930)*
Adams	24	24
Allegheny	1,319	1,287
Armstrong	52	47
Beaver	92	85
Bedford	18	17
Berks	167	165
Blair	110	101
Bradford	41	36
Bucks	65	62
Butler	58	54
Cambria	164	163
Carbon	30	29
Center	21	20
Chester	83	76
Clarion	27	24
Clearfield	61	61
Clinton	23	22
Columbia	32	31
Crawford	28	23
Cumberland	36	33
Dauphin	177	172
Delaware	114	107
Elk	26	24
Erie	157	132
Fayette	136	120
Franklin	53	43
Greene	30	27
Huntingdon	31	30
Indiana	56	54
Jefferson	50	46
Juniata	8	8
Lackawanna	241	228
Lancaster	154	153
Lawrence	67	58
Lebanon	31	25
Lehigh	129	129
Luzerne	314	282
Lycoming	113	111
McKean	39	36
Mercer	75	71
Mifflin	24	20
Monroe	21	19
Montgomery	169	169
Montour	31	31
Northampton	139	132
Northumberland	66	66
Perry	13	13
Philadelphia	2,168	2,030
Potter	12	11
Schuylkill	161	158
Snyder	9	9

County Society	Total No. of Members	Members Paid (April 24, 1930)
Somerset	40	35
Susquehanna	15	11
Tioga	25	21
Union	14	13
Venango	53	47
Warren	46	46
Washington	136	125
Wayne-Pike	30	26
Westmoreland	177	149
Wyoming	10	8
York	129	128

A COUNCILOR'S CONFERENCE

Dr. Edgar S. Buyers, of Norristown, Trustee and Councilor for the Second Councilor District, reports a very successful spring conference of the secretaries of the county societies comprising his District, which was held on March 28. After dinner there was a round table discussion, which was entered into by all present, and such practical subjects were discussed as: "What to do if threatened with suit for alleged malpractice"; "How to collect 100 per cent dues"; "The coming councilor district meeting at Valley Forge"; "Volunteers for case reports for the Johnstown Session"; "The importance of prompt report of county society meetings to the PENNSYLVANIA MEDICAL JOURNAL, and what constitutes such reports," etc.

These meetings, held once a year, have been helpful to the Councilor and have been most interesting and instructive to the secretaries, as evidenced by their 100 per cent attendance. We commend the holding of such meetings to the other members of our Board of Trustees and Councilors.

SIXTH COUNCILOR DISTRICT MEETING

The 1930 meeting of the Sixth Councilor District, which includes Blair, Center, Clearfield, Huntingdon, Juniata, Mifflin, and Perry Counties, to be held under the direction of Dr. A. S. Kech, of Altoona, as Trustee and Councilor for the District, will take place in the Grand Theater, Huntingdon, on Thursday, May 15, 1930, at 9 a. m. The fifteenth annual meeting of the Pennsylvania Radiological Society will be held in conjunction with this meeting. All members of the county societies comprising the District, as well as adjoining county societies, and all physicians who are eligible to membership, are cordially invited to be present. Guest speakers on the program include Chevalier Jackson, M.D., and David Bowen, M.D., of Philadelphia; M. Swick, M.D., of New York City; Elmer L. Eggleston, M.D., of Battle Creek, Michigan; Harry E. Mock, M.D., of Chicago, Ill.; also President Sharpless and President-Elect Patterson.

SEVENTH COUNCILOR DISTRICT MEETING

Dr. Walter S. Brenholtz, of Williamsport, is planning to hold the annual meeting of the Seventh Councilor District in Williamsport, on Friday, June 13, 1930. Dr. Harry M. Hall, of Wheeling, West Virginia, former president of the West Virginia State Medical Society, will be one of the guest speakers at this meeting.

NINTH COUNCILOR DISTRICT MEETING

Dr. Jay B. F. Wyant, of Kittanning, who is retiring next October from the Board of Trustees, after having served as Trustee and as Councilor for the Ninth Councilor District for the past fifteen years, will preside at the annual meeting of this District, which will be held at the Kittanning Country Club, on Tuesday, June 3, 1930. The program will include talks on mental hygiene subjects, as follows: "Relation of the State Mental Hospitals to the Mental Hygiene Program," by Harry W. Mitchell, M.D., of Warren; "Selective Sterilization of the Mentally Defective," by Harvey M. Watkins, M.D., of Polk. Secretary Walter F. Donaldson will speak on "The Retiring District Councilor." Luncheon will be served at 1 p. m. It is hoped that there will be a large attendance from the counties comprising and surrounding this District.

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to April 15:

ALLEGHENY: *New Members*—Maurice E. Hodgdon, 121 University Place, Manuel S. Tansinsin, 125 De Sota St., Pittsburgh; Carl J. Cubbison, 1112 Swissvale Ave., Wilkinsburg. *Resignation*—Benjamin F. Feingold, Chicago, Ill. *Removal*—Cyril F. Lauer from Pittsburgh to 380 Franklin Ave., Aliquippa (Beaver Co.). *Death*—Franklin B. Miller, Pittsburgh (Univ. of Pa. '86), April 1, aged 71.

ARMSTRONG: *Resignation*—Henry B. Stone, Cleveland, O.

BEAVER: *New Members*—Bryce A. Newbaker, Penn-Beaver Hotel, Rochester; Harry M. Snyder, Baden. *Death*—Walter H. Herriott, Freedom (Jeff. Med. Coll. '08), Jan. 2, aged 54.

BEDFORD: *Reinstated Member*—Irvin C. Stayer, Woodbury.

BLAIR: *Reinstated Members*—William H. Morrow, Bellwood, Louis E. McKee, 1104 Thirteenth Ave., Altoona. *Transfer*—Lawrence A. Zinsmeister, Sproul, from Clearfield County Society. *Resignation*—Albert N. Spanogle, Altoona. *Death*—William P. Harlos, Altoona (Univ. of Pgh. '05), Nov., 1929.

BRADFORD: *Resignation*—Ethan F. Butler, Elmira, N. Y.

BUCKS: *New Member*—Thorne S. Harris, Bristol.

BUTLER: *New Member*—David Gordon Jones, 124 W. Cunningham St., Butler.

CAMBRIA: *New Members*—James T. Taylor, 408 Franklin St., Edward C. Dankmyer, 240 Market St., Johnstown.

CHESTER: *New Members*—William Limberger, West Chester; J. Oscar Dicks, West Chester.

CLEARFIELD: *Death*—John Dale, Philipsburg (Geo. Wash. Univ. '95), recently, aged 65.

COLUMBIA: *New Member*—Q. E. Baker, Espy.

CRAWFORD: *Resignation*—Frank Hazen, Rochester, Minn. (formerly of Meadville).

DAUPHIN: *Resignation*—Julia Russell, Harrisburg.

ERIE: *New Member*—Hyman L. Casselman, 2612 Parade St., Erie.

FAYETTE: *New Members*—Alexander M. Duff, Jr., Republic; Harley Henry, Brownsville.

INDIANA: *Death*—James H. Peterman, Cherry Tree (Balt. Med. Coll. '95), Mar. 15, aged 61.

JEFFERSON: *Resignation*—William E. Dodd, Martinsburg, W. Va.

LACKAWANNA: *New Members*—John E. Manley, 1414 Pittston Ave., Scranton; James J. Mecca, 235 Walnut St., Dunmore.

LANCASTER: *Transfer*—Francis S. Chambers, Elizabethtown, from Philadelphia County Society. *Deaths*—Maurice M. Denlinger, Rohrerstown, (Jeff. Med. Coll. '90), Apr. 6, aged 64; Leedom Sharp, Intercourse (Univ. of Pa. '95), Apr. 10, aged 70.

LAWRENCE: *New Member*—James L. Popp, New Castle.

LEHIGH: *New Members*—Jacob J. Levy, 40 N. Ninth St., Roland Heller, 1451 Chew St., Parry W. O'Donnell, 504 Tilghman St., Charles K. Rose, Jr., 2115 Hanover Ave., Allentown; Halburt H. Earp, Catasauqua; Fred C. Knappenberger, Fullerton. *Resignation*—Ruth Newell Brown, Cementon; Joseph J. Callahan, Philadelphia (formerly of Catasauqua). *Death*—Franklin B. Scheirer, Allentown (Univ. of Pa. '95), Mar. 30, aged 62.

LUZERNE: *Resignation*—William F. Harrison, Plains. *Transfer*—Frank M. Pugliese, 338 S. Franklin St., Wilkes-Barre, from Lackawanna County Society. *Deaths*—Martin C. Gaughan, Pittston (Univ. of Pa. '06), Nov., 1929, aged 63; Samuel A. Ruffner, Kingston (Jeff. Med. Coll. '90), recently, aged 65.

MONTGOMERY: *New Member*—Paul T. Moyer, Landsdale. *Death*—Malcolm S. Council, Bryn Mawr (Univ. of Md. '96), Mar. 23, aged 62.

MONROE: *New Member*—W. W. White, E. Stroudsburg.

NORTHUMBERLAND: *Death*—Horatio W. Gass, Sunbury (Med. Chi. Coll. Phila. '98), Mar. 21, aged 62.

PERRY: *Death*—Edward E. Moore, New Bloomfield (Jeff. Med. Coll. '87), Mar. 4, aged 65.

PHILADELPHIA: *New Members*—Jacob Hoffman, 1829 Pine St., Arthur G. Schoch, 4504 Pine St., William H. Crawford, 90 State Rd., Highland Park, Upper Darby, Raymond W. Brust, 1536 Pine St., Herbert A. Widing, 4627 Baltimore Ave., Edward C. Davis, 648 E. Allegheny Ave., Thomas H. Miller, 3704 Spruce St., Michael P. Corcoran, 2033 Pine St., Alexander Silverstein, 3243 W. Allegheny Ave., Varnum C. Southworth, 617 W. Mt. Airy Ave., Francis L. Zabrowski, 3019 Richmond St., Donald Marion Pillsbury, 4224 Osage Ave., Leeman E. Snodgrass, 119 E. Wyoming Ave., S. Creadick Rhoads, 1635 S. Broad St., Joseph G. Weiner, 5762 N. Fifth St., James E. Bowman, 4515 Vankirk St. *Resignation*—Henry Z. Goldstein, Philadelphia; S. Elizabeth A. Schetky, Hood River, Oregon. *Removal*—Kempton P. A. Taylor from Guatemala, C. A., to Prado 98, Havana, Cuba. *Transfer*—Harvey A. Bartle from Allegheny County Society; Charles W. Lueders from Montgomery County Society.

SCHUYLKILL: *Removal*—Edgar W. Kemner from Tamaqua to Upper Darby; Russell F. Miller from Pottsville to Philadelphia General Hospital, Philadelphia.

SOMERSET: *Death*—George B. Masters, Macdonaldton (Med. Coll. Ohio '79), Apr. 10, aged 74.

WASHINGTON: *New Members*—Charles E. Lawson, Morganza; George B. Briel, 6 S. Main St., Washington. *Reinstated Members*—Louis A. Carlet, 803 Allison Ave., Washington; Victor P. Vieslet, 400 Crist Ave., Charleroi; James L. Brennan, Washington. *Death*—Loyal G. Lutz, Rosco (Univ. of Pgh. '04), Jan. 19, aged 50.

WAYNE: *New Member*—Edwin S. Miller, Pleasant Mount.

WESTMORELAND: *Resignation*—Anna J. Gesler, Greensburg.

VENANGO: *Death*—Harry F. McDowell, Franklin (Univ. of Pgh. '95), aged 63.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since March 17. Figures in first column indicate county society numbers; second column, State Society numbers:

1930

March	15	Delaware	94-95	5256-5257	$15.00
	17	Butler	17-45	5258-5286	217.50
		Crawford	17-20	5287-5290	30.00
		Westmoreland	96	5291	7.50
		Elk	19-20	5292-5293	15.00
		Lancaster	120-133	5294-5307	105.00
		Jefferson	24-31	5308-5315	60.00
		Mercer	66	5316	7.50
		Franklin	51	5317	7.50
		Perry	11	5318	7.50
		Center	14-15	5319-5320	15.00
		Dauphin	148	5321	7.50
		Clearfield	20	5322	7.50
		Lehigh	49-103	5323-5377	412.50
	18	Greene	19-25	5378-5384	52.50
		Westmoreland	97-98	5385-5386	15.00
		Armstrong	43-44	5387-5388	15.00
		Carbon	27-28	5389-5390	15.00
		Cumberland	23-25	5391-5393	22.50
		Union	10-11	5394-5395	15.00
		Cambria	105-136	5396-5427	240.00
		Lycoming	96-99	5428-5431	30.00
	19	Mercer	67	5432	7.50
		Schuylkill	128-134	5433-5439	52.50
		Dauphin	149	5440	7.50
		Northampton	103-116	5441-5454	105.00
		Center	16	5455	7.50
	20	Bradford	30-33	5456-5459	30.00
		Lancaster	134-139	5460-5465	45.00
		Berks	151	5466	7.50
		Fayette	75-92	5467-5484	135.00
		Dauphin	150-151	5485-5486	15.00
		Schuylkill	135-136	5487-5488	15.00
		Bucks	43-50	5489-5496	60.00
		Cumberland	26-28	5497-5499	22.50
		Union	12-13	5500-5501	15.00
		Clinton	17-20	5502-5505	30.00
		Chester	49-63	5506-5520	112.50
		Indiana	48-50	5521-5523	22.50
	21	Wayne-Pike	16-19	5524-5527	30.00
		Armstrong	45	5528	7.50
		McKean	34-35	5529-5530	15.00
		Jefferson	32-36	5531-5535	37.50
		Schuylkill	137	5536	7.50
		Venango	34-39	5537-5542	45.00
		Delaware	96-97	5543-5544	15.00
		Berks	152	5545	7.50
		Potter	11	5546	7.50
		Dauphin	152-153	5547-5548	15.00
		Clearfield	21-46	5549-5574	195.00
		Lycoming	100-101	5575-5576	15.00
		Mercer	68	5577	7.50
	22	Washington	1-110	5578-5687	825.00
		Tioga	1-12	5688-5699	90.00

1930					
March	22	Susquehanna	7-10	5700-5703	$30.00
		Washington*	143	7838	5.00
		Washington**	142-143	7846-7847	15.00
	24	Lackawanna	181-210	5704-5733	225.00
		Montgomery	156-164	5734-5742	67.50
		Beaver	60-62	5743-5745	22.50
		Delaware	98	5746	7.50
		Bedford	14-16	5747-5749	22.50
		Dauphin	154	5750	7.50
		Carbon	29	5751	7.50
		Monroe	16-18	5752-5754	22.50
		Lycoming	102	5755	7.50
	25	Northumberl'd	54-59	5756-5761	45.00
		Columbia	25-26	5762-5763	15.00
		Schuylkill	138-143	5764-5769	45.00
		Cambria	137-148	5770-5781	90.00
		Cumberland	29	5782	7.50
		Bedford	17	5783	7.50
		Snyder	7	5784	7.50
		Venango	40-42	5785-5787	22.50
		Northumberl'd	60	5788	7.50
		Indiana	51	5789	7.50
	26	Erie 83-88,	90-117	5790-5823	255.00
		Crawford	21-23	5824-5826	22.50
		Greene	26	5827	7.50
		Dauphin	155-160	5828-5833	45.00
		Northampton	117-120	5834-5837	30.00
		Luzerne	203-242	5838-5877	300.00
		Mercer	69	5878	7.50
		Blair	69-83	5879-5893	112.50
		Fayette	93-98	5894-5899	45.00
		Huntingdon	30	5900	7.50
		Wayne-Pike	20	5901	7.50
		Washington	111-114	5902-5905	30.00
	29	Dauphin	162-166	5906-5910	37.50
		Lawrence	35-50	5911-5926	120.00
		Wyoming	1-8	5927-5934	60.00
		Lycoming	103-105	5935-5937	22.50
		Delaware	99	5938	7.50
		Adams	17-18	5939-5940	15.00
		Armstrong	46	5941	7.50
		Bucks	51-54	5942-5945	30.00
		Tioga	13-18	5946-5951	45.00
	31	Cambria	149-163	5952-5966	112.50
		York	111-127	5967-5983	127.50
		Butler	46-48	5984-5986	22.50
		Montgomery	165-169	5987-5991	37.50
		Schuylkill	144-150	5992-5998	52.50
		Luzerne	243-249	5999-6005	52.50
		Wayne-Pike	21-22	6006-6007	15.00
		Snyder	8	6008	7.50
		Northumberl'd	61-62	6009-6010	15.00
		Dauphin 161,	167-168	6011-6013	22.50
		Tioga	19	6014	7.50
		Delaware	100-105	6015-6020	45.00
April	1	Berks	153-164	6021-6032	90.00
		Cumberland	30	6033	7.50
		Lancaster	140-151	6034-6045	90.00
		Adams	19-20	6046-6047	15.00
		Northumberl'd	63	6048	7.50
		Indiana	52	6049	7.50
		Chester	64-69	6050-6055	45.00
		Monroe	19	6056	7.50
		Lawrence	51	6057	7.50
		Butler	49-50	6058-6059	15.00
		Clearfield	47-52	6060-6065	45.00
		Mercer	70	6066	7.50
		Elk	21	6067	7.50
		Franklin	52	6068	7.50
		Venango	43	6069	7.50
	2	Luzerne	250-256	6070-6076	52.50
		Northampton	121-122	6077-6078	15.00
		Lycoming	106-109	6079-6082	30.00
		Adams	21	6083	7.50
		Northumberl'd	64	6084	7.50
		Washington	115-117	6085-6087	22.50
		Tioga	20	6088	7.50

* Indicates 1928 dues.

** Indicates 1929 dues.

1930					
April	2	York	128	6089	$7.50
		Dauphin	169	6090	7.50
		Cumberland	31	6091	7.50
		Delaware	106	6092	7.50
		Erie 89,	118-132	6093-6108	120.00
		Bucks	55-61	6109-6115	52.50
	3	Indiana	53	6116	7.50
		Luzerne	257-268	6117-6128	90.00
		Northampton	124	6129	7.50
		Washington	118-120	6130-6132	22.50
		Fayette	99-108	6133-6142	75.00
		Venango	44	6143	7.50
		Dauphin	170	6144	7.50
		Blair	84-93	6145-6154	75.00
		Wayne-Pike	23-26	6155-6158	30.00
		Tioga	21	6159	7.50
		Beaver	63-67	6160-6164	37.50
		Westmoreland	99-147	6165-6213	367.50
		Philadelphia	1373-1970	6214-6811	4,485.00
		Schuylkill	151-152	6812-6813	15.00
		Somerset	28-35	6814-6821	60.00
		Lancaster	152-153	6822-6823	15.00
		Westmoreland	148-149	6824-6825	15.00
		Northumberl'd	65	6826	7.50
		Adams	22	6827	7.50
	9	Cumberland	32	6828	7.50
		Lehigh	105-131	6829-6855	202.50
		Columbia	27-29	6856-6858	22.50
		Jefferson	37-41	6859-6863	37.50
		Bradford	34-36	6864-6866	22.50
		Lawrence	52-54	6867-6869	22.50
		Luzerne	269-272	6870-6873	30.00
		Fayette	109-116	6874-6881	60.00
		Washington	121	6882	7.50
		Dauphin	171-172	6883-6884	15.00
		Schuylkill	157	6885	7.50
		Beaver	68-76	6886-6894	67.50
		Adams	23	6895	7.50
		Mifflin	20	6896	7.50
		Luzerne	273	6897	7.50
		Clarion	22-24	6898-6900	22.50
		Clearfield	53-57	6901-6905	37.50
	10	Berks	165	6906	7.50
		Lackawanna	211-221	6907-6917	82.50
		Butler	51	6918	7.50
		Schuylkill	153-156	6919-6922	30.00
		Lycoming	110	6923	7.50
		Jefferson	42-44	6924-6926	22.50
		Butler	52	6927	7.50
		Perry	12	6928	7.50
		Lawrence	55-58	6929-6932	30.00
		Schuylkill	158	6933	7.50
		Elk	22-23	6934-6935	15.00
		Clinton	2	6936	7.50
		Susquehanna	11	6937	7.50
		Chester	70-73	6938-6941	30.00
		Venango	45-46	6942-6943	15.00
		Northumberl'd	66	6944	7.50
		Columbia	30-31	6945-6946	15.00
		Cumberland	33	6947	7.50
	12	Allegheny	879-1287	6948-7356	3,067.50
		Elk	24	7357	7.50
	14	Fayette	117-120	7358-7361	30.00
		Adams	24	7362	7.50
		Snyder	9	7363	7.50
		Washington	122-124	7364-7366	22.50
		Center	17-19	7367-7369	22.50
		Mercer	71	7370	7.50
		Northampton	125-127	7371-7373	22.50
		Greene	27	7374	7.50
		Indiana	54	7375	7.50
	15	Luzerne	274-282	7376-7384	67.50
		Northampton	128-129	7385-7386	15.00
		McKean	36	7387	7.50
		Montgomery	170	7388	7.50
	16	Lackawanna	222-226	7389-7393	37.50
		Beaver	77-85	7394-7402	67.50
		Washington	125	7403	7.50
		Butler	53-54	7404-7405	15.00

1930					
April	16	Venango	47	7406	$7.50
		Blair	94-101	7407-7414	60.00
	17	Center	20	7415	7.50
		Chester	74-76	7416-7418	22.50

COMMITTEE ON PUBLICITY

J. D. Keiper, M.D., *Chairman*
Johnstown, Pa.

PHYSICIANS MAY BE AIR-MINDED AT ANNUAL CONVENTION

For the benefit of physicians who, during the convention at Johnstown, October 6 to 9, may be air-minded, the chairman of the Aviation Committee has submitted the following brief on *Flying*. Dr. Joseph P. Replogle, the chairman, is serious when he assures the public that Johnstown can satisfy any wishes that are coördinate with aviation, as the brief concisely expresses.

Everything looks up to the fact that the coming Convention will be a big one, and arrangements are being worked out in detail to assure its being such. Not a single factor which would add to a successful meeting is being overlooked. All committees of Dr. Olin G. A. Barker are working harmoniously, and it is believed that every facility will be adequate. It is suggested that reservations be made at the earliest possible moment.

FLYING

Safe flying facilities are available at the Johnstown Municipal Airport.

One may fly with perfect assurance that every precaution has been taken to insure absolute safety.

A DeHaviland Gypsy Moth, similar to the plane flown by the Prince of Wales, and a Curtis Robin three-place cabin plane, similar to the airplanes which hold the world's endurance record and numerous stunt records, are available at all times for sight-seeing and distance flights. Both planes are flown by careful, experienced pilots, who have operated them for many hours from the local field. Each airplane is thoroughly inspected throughout from wing tips to engine, every morning, by an experienced mechanic. Ample landing areas are available, and the field is within gliding distance of all points of the course used for the sight-seeing trips.

A splendid view of the mountains and river valleys, for a range of thirty miles, is afforded on clear days, as well as an interesting survey of Johnstown and vicinity.

A short trip is available at $3.00 a seat; and a fifteen mile ride, at $5.00 a seat.

For one who has never flown, the security of safe equipment and pilots should afford a splendid opportunity for the first ride, while those who have flown before will enjoy a trip all the more for this assurance.

The Municipal Airport is located about three miles from the center of Johnstown, directly west of Westmont, its most beautiful suburb.

COMMITTEE ON SCIENTIFIC WORK

C. Howard Marcy, M.D., *Chairman*
Pittsburgh, Pa.

PROGRAM OF THE SURGICAL SECTION

Symposia, which have added materially to the interest of the Surgical Section in former years, will again be a feature in the 1930 program.

Dr. John H. Jopson of Philadelphia will act as principal in a symposium on "Fractures of the Humerus."

"Ovarian Cysts Benign, Malignant, and Endometrial" will be discussed by well-known gynecologists. Dr. Brooke M. Anspach, professor of gynecology at Jefferson Medical College, will be the principal in this symposium.

A joint meeting of the Surgical and Pediatric Sections is arranged for Wednesday, October 8. Papers on "The Diagnosis, X-ray Findings, and Surgical Treatment of Osteomyelitis; Acute and Chronic Empyema; Surgical Treatment of Empyema" will be presented at this meeting. The guest speaker of the Pediatric Section will occupy the third or final period of this day's program.

Eight Case Reports, all of intense interest, "Intravenous Therapy, Injection Method for the Cure of Varicose Veins, and Blood Transfusion" are subjects listed for the program for Thursday, October 9.

Dr. J. P. Schaeffer, professor of anatomy at Jefferson Medical College, will present a paper on "The Anatomy and Physiology of the Sympathetic Nervous System," and Dr. Francis C. Grant of Philadelphia will read a paper on "Sympathectomy."

We have been fortunate in securing Dr. Joseph Colt Bloodgood, of Baltimore, and Dr. Hubert A. Royster, of Raleigh, N. C., as guest speakers. Dr. Bloodgood will speak on "The Problems of Cancer of the Stomach," and Dr. Royster will devote his period to the subject of "Appendicitis."

COMMISSION ON CANCER

JONATHAN M. WAINWRIGHT, M.D., *Chairman*
Scranton, Pa.

CANCER COURSE AT HARRISBURG

An all day cancer course will be conducted at Harrisburg, Wednesday, June 4, 1930, under the auspices of the Dauphin County Medical Society, and sponsored by the Cancer Commission of the State Medical Society.

The cancer course is being held at Harrisburg in order to benefit the physicians of central and southern Pennsylvania. The attendance should be unusually large, on account of the exceedingly valuable subjects for discussion, and the intensely attractive program that has been arranged.

A registration fee of three dollars will be charged, which will include the informal dinner at the evening session to be held at the Penn Harris Hotel. The Committee requests that those who expect to attend this cancer study course will register before the first of June. Registration should be made to Dr. John M. J. Raunick at Harrisburg. In case a physician is providentially delayed in registering before his arrival, registration may be made at the Polyclinic Hospital, Harrisburg. The program will be conducted on standard time.

The physician must bear in mind that he sees the cancer patient first, and upon his alertness and keen perception depend the making of an early diagnosis. He should know, too, what to advise the patient, when early diagnosis has been made. If the morbidity and mortality of cancer is to be reduced, early recognition and prompt and proper treatment must be instituted. When a patient does not consult the physician in time to make an early diagnosis, the physician is not to be blamed. On the other hand, the physician must appreciate that much of his work involves preventive medicine, and he must know too how to advise his patients to prevent or reduce to a minimum the occurrence of malignancy.

The subject of cancer plays a very important rôle in periodic health examinations. Remember, too, that the public is very well educated upon cancer through the many mediums of lay education, and the physician must be properly instructed if he is to cope intelligently with an enlightened public.

The following is the program:

Morning Program—POLYCLINIC HOSPITAL

9.30 to 10.00 a. m.

Rectum

The Early Clinical Symptoms of Cancer of the Rectum.
Rectal Lesions that may lead to Cancer.
Method and Technic of Rectal Examination.
DAMON PFEIFFER, M.D., Philadelphia.

10.00 to 10.45 a. m.

Uterus

Prevention of Cancer of the Cervix and Body of the Uterus.
HARVEY SMITH, M.D., Harrisburg.

The Treatment of Cancer of the Cervix:
1. Pathologically early cases.
2. Pathologically late cases.

GEORGE E. PFAHLER, M.D., Philadelphia.

10.45 to 11.15 a. m.

Stomach

The Clinical Pictures that suggest a Possible Gastric Cancer.
Is there a Relationship between Gastric Ulcer and Gastric Cancer?
HAROLD FOSS, M.D., Danville.

11.15 to 12.15 p. m.

Symposium on Improved Service for the Cancer Patient

Value of Better Cancer Records.
The Tumor Clinic in a General Hospital.
J. M. WAINWRIGHT, M.D., Scranton.
Survey of Treatment given Cancer Patients in the General Hospitals of Pennsylvania.
THEODORE B. APPEL, M.D., Harrisburg,
State Secretary of Health.
What constitutes Modern Cancer Therapy?
DAMON PFEIFFER, M.D., Philadelphia.

12.30 p. m.

Luncheon

Served at the POLYCLINIC HOSPITAL.

Afternoon Program—HARRISBURG HOSPITAL

2.00 to 3.00 p. m.

Breast

Tumors of the Breast.
Diagnostic Methods and Aids.
Transillumination.
Biopsy—Proper Technic.
Interpretation of Benign Lesions.
Indications for and against Operation.
JOSEPH C. BLOODGOOD, M.D., Baltimore, Md.

Results of Radiation Treatment for Inoperable Breast Cancers.
Does Postoperative Radiation increase "Surgical Cures"?
GEORGE E. PFAHLER, M.D., Philadelphia.

3.00 to 4.00 p. m.

Skin and Mouth

Discussion of Some Common Lesions of the Mouth that may lead to Cancer.
How to Examine the Mouth.
How shall Cancer of the Lip be Treated?
Treatment of Cancer of the Buccal Cavity.
Incidence of Tertiary Syphilis and Cancer of the Mouth.
JOSEPH C. BLOODGOOD, M.D., Baltimore, Md.

Discussion of Some Common Lesions of the Skin that may lead to Cancer.
Treatment of Pigmented Moles and Birthmarks.
GEORGE E. PFAHLER, M.D., Philadelphia.

4.00 to 4.30 p. m.

Some Problems in Cancer Research

Are there Evidences of a Constitutional or Hereditary Factor in Cancer Occurrence?
Status of Biochemical Attacks on Cancer.
Is there a Cancer Serum of Proved Value?
Charles F. Geschickter, M.D., Baltimore, Md.

4.45 to 5.30 p. m.

Pathologic Demonstration

Harrisburg Hospital Laboratory.
George R. Moffitt, M.D., Harrisburg.
Evening Meeting—Penn-Harris Hotel

6.30 to 9.30 p. m.

Dinner

Cancer as a Public Health Problem.
George H. Bigelow, M.D., Boston, Mass.,
State Commissioner of Health.

Address

Hon. John S. Fisher, *Governor of Pennsylvania.*

County Society Reports

ARMSTRONG—MARCH

At the stated meeting of the Armstrong County Medical Society, Dr. C. A. Rogers, of Freeport, reported three cases of psittacosis. Case 1. M. C. S., female, aged 53, married, seen for the first time January 2, at her home. Her chief complaint was headache, vomiting, high temperature, and a feeling of complete exhaustion. She had been well until that day; had gone to church in the morning and about noon she had a chill, accompanied by vomiting. The temperature was 104.2° F.; pulse, 94; respirations, 28. Both lungs were clear, free of râles, except the right lower lobe, in which there was increased voice sounds and bronchial breathing. The abdomen was negative. On January 3, her condition was unchanged. During the following four days careful examinations of the chest failed to disclose any cause for the temperature, and during this period the vomiting continued. The respirations increased from 28 on the first day of the disease, to 36 and 40 on the fifth day. During this time there was no cyanosis. On January 8, the temperature went to 105°F., the delirium was more pronounced, and the patient developed a harsh, brassy cough, with no expectoration, and which seemed to come from the upper bronchi. The pulse at this time ranged from 96 to 102; rhythm and volume were good. On the morning of January 9, the patient's condition was very much worse. The pulse was 120, respirations 46 to 50. There was incontinence of both bowels and bladder, and pronounced symptoms of rapid dissolution. Râles appeared throughout both lungs. The pulse continued to increase in rapidity and the respirations were more rapid and shallow. The patient became comatose and died January 11, about 2 p. m.

One would think from the temperature and the increased respirations that this was a case of pneumonia, but on the other hand the slowness of the pulse and the examination of the lungs, eliminated pneumonia. The white cell count was 6200 which would demonstrate very clearly it was not a pneumonic condition. The temperature, delirium, and toxicity might lead one to believe that the case was one of typhoid fever of a virulent type, but this was ruled out by the onset of the disease which started with a history of feeling as well as usual, until twenty-four hours prior to being taken ill; no intestinal symptoms, no rose spots, and no morning remission of temperature.

Although Dr. Ross was puzzled, yet, throughout the disease he was suspicious that he might have to deal with a case of psittacosis, knowing that on December 23, 1929, the family had purchased a parrot, which was sick at the time, from a pet shop in Pittsburgh, Pa. The salesman told the purchaser that its sickness was due to its recent arrival from South America, and because of the trip and crowded quarters, it was in this condition. It had a persistent cough and diarrhea and died on December 30, 1929.

Case 2. E. S., aged 21, female, single. This patient was a granddaughter of the patient reported as Case 1, and had contact with the parrot. This patient consulted Dr. Ross on the night of January 4 at his office. She complained of being chilly, nauseated, and very tired. The temperature was 104.2°F. The next four days the temperature remained about the same, the respirations ranging from 36 to 40. There was persistent vomiting, which continued throughout the disease. Examination of the chest showed slight increase of vocal fremitus and bronchial breathing in the lower lobe of the left lung, but at no time was there a definite consolidation. On January 9, the fifth day of the disease, incontinence of both bladder and bowels began, which continued throughout the disease. Delirium was pronounced at all times. Leukocyte counts, taken at various times throughout the disease, were between 5000 and 6000. From the fifth day of the disease until the twenty-first day there was little or no change, except the respirations became more rapid and for days were between 50 and 60. The pulse at no time corresponded with the temperature and respirations, ranging from 94 to 100. On the twenty-first day of the disease the temperature came down to 102.2°F., reaching normal on the twenty-sixth day. Respirations also became normal at this time. The patient made an uneventful convalescence.

Case 3. L. W., aged 9, also a granddaughter of the patient reported as Case 1, and who had contact with the parrot, was taken ill on January 12 with practically the same symptoms as the other two patients, but to a lesser degree. The temperature ranged from 103.2°F. to 104°F., for about two weeks. None of the other symptoms was as aggravated as in the two previous cases. The leukocyte count was around 6000. The most interesting thing about this case was the enlargement of the spleen, which persisted for at least ten days after all other symptoms had subsided.

BLAIR—APRIL

On April 22, the Society met at the Altoona Hospital Nurses' Home.

Dr. A. S. Kech gave a demonstration of the electrocardiograph and used a number of tracings to illustrate the various lesions whose clinical interpretations can be further verified with this established instrument of precision.

Mr. Mallory, one of the district State congressional candidates, was present and spoke on our State and local political situation.

Dr. Henry W. Salus, of Johnstown, editor of the *Cambria County Medical Bulletin,* one of the best in the State, advised our editors how our bulletins may be made better.

A petition to the State Health Department officials was drawn up and passed. It urged further financial aid to, and carrying out of plans for, extension of the Cresson Tuberculosis Sanatorium.

Dr. Magee was placed in charge of the reference of patients, by a card system, to the numerous free clinics about the city. This is the beginning of an experiment for better coöperation between the physicians and the clinics, which we hope will redound to the benefit of the patients referred.

E. F. WILLIAMS, M.D., *Reporter.*

CAMBRIA—FEBRUARY-MARCH-APRIL

Exceptionally interesting and pertinent scientific papers have made up the programs of this year's sessions. Increased interest and enthusiasm of the members have been manifested by monthly attendance, exceeding all former records, each meeting approximating one hundred members. The society has been fortunate in securing speakers who are recognized as authority on their subjects.

At the February meeting, with President Joseph J. Meyer in the chair, the business session was followed by a paper read by Harry Lowenburg, M.D., of Philadelphia, Pa., on "Diagnosis and Treatment of Pneumonia in Children, with a Consideration of the Treatment of Pneumococcic Empyema by the Intrapleural Injection of Optochin." Interesting and salient facts brought out by Dr. Lowenburg included the following: The operation for empyema should never be an emergency operation. Proper care of pneumonia was stressed with attention given to (a) assurance that resolution is complete; (b) frequent aspiration to determine if pus is present. As to the operation proper, the speaker emphasized the importance of considering the particular operation which would secure the most adequate drainage. Mention was also made of need for proper nutrition of the patient.

In mentioning optochin, the speaker said that while this treatment for empyema was still in its infancy, good results were being realized by its use. Dr. Lowenburg has had wonderful success with the patients he has treated by this method.

In the discussion which followed Dr. Lowenburg's paper, Dr. W. F. Mayer and Dr. L. H. Mayer enlarged on the salient points.

An eminent authority on contagion, Samuel S. Woody, M.D., of Philadelphia, Pa., also spoke at this session, on "The Present Day Hospital for Contagious Diseases." Several years ago Dr. Woody's ideas may have been considered revolutionary, for he believes that too much emphasis is laid upon complete isolation of contagion and the old idea of no visiting of contagious hospitals or quarters is wrong.

Today his views are acceptable and institutions are adopting his contention that supervised visiting may result in no harm. To such an extent has this theory been received locally that for the first time in the history of the Johnstown Municipal Hospital, the doors are open, with certain approved limitations, to visitors. Dr. Woody expressed his belief that the time is coming when contagious-disease hospitals and wards will not be feared as formerly, and when they will be incorporated with, rather than isolated from, other institutions. More education as to methods along this line is needed he believes, before such a practice may become general. He pointed out the advantages of such procedure, citing that in time of epidemics, contagious hospitals could be used to advantage.

At the March meeting, "The Genius and Fallacies of Prescription Writing," was the paper given by Samuel A. Savitz, M.D., of Philadelphia, Pa. This was particularly interesting, affecting as it does, almost every doctor, and further because almost every doctor realizes this subject is not adequately stressed in medical school preparation. Dr. Savitz pointed out that fewer drugs should be used, and these should be drugs officially recommended by the U. S. P.

He warned against the clever sales' talks of so-called detail men on the merits of the drugs they sell, which are as a rule costly and not necessarily more efficacious than simpler remedies. Especially did he urge prescribers to avoid these drugs that are not official preparations.

Fewer drugs and the wise use of them was the summary of the discussion which followed and was opened by Dr. C. K. Tredennick.

A humorous and philosophical address on "The Country Doctor," by John J. Dailey, M.D., of McAdoo, Pa., was enjoyed. Many good points, clothed in humor, lauded the country doctor as an ever-to-be-relied-upon benefactor of the people.

Concluding this meeting, this society went on record as opposed to the passage of the two Porter Bills, introduced in the National House of Representatives and which prescribe entirely new regulations for administration of the Federal Narcotic Laws. Dr. Salus, chairman of Public Policy and Legislation, offered the resolution of opposition.

At the April meeting, the session was successful in securing for a speaker one of the foremost authorities on medical jurisprudence, W. S. Wadsworth, M.D., of Philadelphia, Pa. His subject, "Past, Present, and Future of Legal Medicine in this Country," was an admirable discussion, a bit caustic when he referred to a recognized truth that through lack of specialized legal training, doctors are often necessarily the subject of the banter and word play of lawyers and judges. He recommended the specialized training of more men in the field of medical jurisprudence, who could ably act in cases of litigation.

Attorney Howard Stull, member of the Cambria County bar, and also guest speaker of the evening, convincingly defended his profession in the discussion, pointing out that a greater effort was being made among lawyers and judges to coöperate with the physician. Robert M. Palmer, M.D., also led in the discussion and his aspect of the subject was extremely interesting.

Plans for the Annual State Convention at Johnstown are going forward with increased interest and enthusiasm. The scientific programs already listed in the JOURNAL are extremely worth one's while and the sessions promise to offer so much of interest that one will wish to keep in mind the dates October 6 to 9 for attendance.

C. H. SCHULTZ, M.D., *Reporter.*

FAYETTE—APRIL

A regular meeting was held April 3, at 8.30 p. m., in the Medical Hall of the Uniontown Hospital. An interesting film, "The Normal Heart," was exhibited. Dr. Howard G. Schleiter, of Pittsburgh, read a paper on "Venous Pressure."—Stephen Hales an English clergyman, in 1733, contributed some important work on the mechanical relations of blood pressure. He fastened a long glass tube inside of a horse's artery, thus devising the first manometer. With the aid of the manometer, he made quantitative estimates of the blood pressure.

There are two methods of taking venous pressure, the direct and indirect. The direct method is probably the better and this method was demonstrated by the speaker on a patient. A blood-pressure cuff was placed around the arm of the patient and air injected up to fifty mm. of mercury. An apparatus for measuring venous pressure in mm. of water was connected to a tube, which in turn was connected to a needle. The needle was inserted into the vein at the elbow and the blood-pressure cuff immediately released. The volume of blood rising in the glass tube was then read and this constituted the venous pressure of the patient.

Venous pressure is the residuum of the blood pressure. One of the first things noted in the study of venous pressure, is that there is no relationship between venous pressure and arterial pressure. Venous pressure is the main factor in regulating cardiac activity. Increased venous return causes increased cardiac output. A reduced return with a lower pressure tends to result in reduced cardiac activity. Cardiac decompensation occurs if the load on the ventricular muscle exceeds the physiologic limit of the muscle to respond. This load represented by the venous pressure can be measured in cm. or mm. of water. Rising venous pressure indicates that the ventricular muscle is losing more and more of its reserve. A sustained rise in venous pressure indicates specifically incapability of cardiac muscle, and no other condition. Changes in venous pressure often precede other cardiac symptoms and signs. The prognosis of a cardiac condition may be determined by venous pressure, which is a guide to treatment. Thus, one can often tell at an early date whether improvement will occur, or vice versa.

Slides showing the results in pneumonia, asthma, and cardiac decompensation were exhibited, in which therapeutic efforts were directed toward a reduction of the venous load. Efforts were made by venesection to reduce the cardiac load to normal physiologic limits. The most effective guide in the therapy of cardiac decompensation was shown to be venous pressure readings. Other slides represented patients with chronic heart disease with compensation, auricular fibrillation, arterial hypertension, and paroxysmal tachycardia. These patients showed no rise of venous pressure.

If venesection is indicated, a drop in venous pressure is often found after venesection, and with great relief to decompensation. If the venous pressure falls after venesection, with relief of decompensation to the patient, followed soon after with a rise in venous pressure and symptoms of decompensation, the prognosis is unfavorable. If the venous pressure remains permanently lower, the outlook is favorable.

Benjamin Halpern, M.D., *Reporter.*

LYCOMING—MARCH

The regular meeting was held at Medical Hall, Williamsport Hospital, on March 14, Dr. J. F. Gordner, of Montgomery, presiding. This meeting was devoted, as is the annual custom, to a symposium on tuberculosis, as a part of the early diagnosis campaign.

"Diagnosis of Tuberculosis in Infancy and Childhood." By William Waddell, M.D., assistant professor of pediatrics, University of Virginia.—The death rate of pulmonary tuberculosis depends on early diagnosis, and this is especially true in childhood. The Pirquet and Mantoux tests are the most common skin tests for tuberculosis. The latter is more accurate as it places tuberculin in direct contact with the subepithelial tissues in the skin. The solutions should be freshly made and kept at a cool temperature. A positive skin test reveals a specific reaction and shows that tubercle bacilli have lived and grown in the patient's tissues. In an older child, a negative test is more valuable than a positive test, as the latter does not mean an active infection at the time the test is made. Acute miliary tuberculosis is common in childhood. It is characterized by loss of weight, fever, no chest signs, and often no cough. The child is tired, has no appetite, and may run a septic temperature. Infection of the tracheobronchial lymph nodes by tubercle bacilli is especially common in children. The signs in the chest are conspicuous by their absence. The symptoms are general rather than local. X-ray examination and tuberculin skin tests give the most help in making a diagnosis. In infants, tuberculosis of the lungs is usually diffuse. In older children, the involvement is more like that in adults. Examination of the sputum is difficult in children as they do not expectorate. Sometimes tubercle bacilli are found in the vomitus containing swallowed sputum. One must remember that chest signs are as a rule absent in even advanced tuberculosis *in childhood.*

"Prognosis, Prophylaxis, and Treatment of Tuberculosis in Infancy and Childhood." By Edwin M. Bell, M.D., of Devitt's Camp.—The outlook on tuberculosis depends a great deal on age incidence. The prognosis is more unfavorable according to the less the age of the infant. Hilum tuberculosis offers a favorable prognosis in childhood. Infection in the early months of life is unfavorable. Our efforts should be directed towards the education of the public in the prevention of tuberculosis in childhood. Contact with tuberculous patients is dangerous to children. Preventoria and open-air schools are accomplishing much in the prophylaxis of tuberculosis. Prevention must begin in childhood. Care must be taken to prevent infection with bovine tuberculosis through improper milk. B.C.G. is an emulsion of a very much attenuated bovine type of bacilli. It acts similar to a harmless vaccine, and from available statistics, it has lowered the percentage of infection in children considerably, and is thought by some to confer an immunity.

"The Surgical Treatment of Pulmonary Tuberculosis." By W. Eugene Delaney, Jr., M.D., Williamsport.—This was a paper on the various surgical procedures for the treatment of pulmonary tuberculosis and was illustrated with motion pictures of chest operations, which he took recently in Vienna.

Dr. J. Gibson Logue, Williamsport, in discussion, stated that the intradural skin test should be part of the routine measure on all children brought for examination. Milk, even pasteurized, should be boiled before the child gets it, especially for the first two years of life. The Mantoux test is practically fool-proof. One must remember that there are no symptoms of pulmonary tuberculosis in children.

Dr. Delaney's paper was discussed by Drs. A. F. Hardt, Ella Ritter, and W. C. Bastian.

W. Eugene Delaney, Jr., M.D., *Reporter.*

PHILADELPHIA

March 12, 1930

The president, Dr. John A. McGlinn, in the chair.

Mayo Clinic Night

"Discussion of Rare Intrathoracic Tumors—Diagnosis and Operability." By Willis S. Lemon, M.D., Mayo Clinic, Rochester, Minn.—A tumor is entirely

abnormal. It derives its support from and lives upon its host yet performs no useful purpose, is not an organ, produces no normal secretion, is, in other words, like an anarchistic personality injected into a communistic group. It is invasive, destructive, metastatic, and lethal. Its cells, while similar to, are not quite normal, of uncertain origin, but are classified because of their similarity to the normal. Malignant tumors produce symptoms rapidly—more so in the chest than elsewhere because the chest walls are not expansive. The anteroposterior diameter of the chest is small yet therein lie the great channels and vital organs. Since 1925, there have come to the clinic more than a hundred malignant growths of the bronchus alone. There is a second group of tumors, not in themselves malicious but which cause death by their presence. There has been much pessimism on the subject of mediastinal growths, but Harrington has on record eight cases cured by surgery. The tumors found are: (1) Substernal thyroid (which is normal tissue badly placed). (2) A granulomatous type, noninvasive. (3) An invasive, round-cell sarcoma (symptoms—cyanosis, dyspnea, cough, pain, dysphagia, inequality of pulse). (4) Tuberculous tumor. (5) Abscess, posttonsillectomic, with death by strangulation of the lungs. (6) Cystic hydroma or lymphangioma causing pressure symptoms. (7) Lipoma (twelve cases known, growing to great size without damage, insinuating, slow, and with late symptoms). (8) Chondroma—elastic, not cellular, with large, cartilaginous matrix, from second rib, intervertebral disk, larynx, or trachea, becoming sarcomatous. (9) Myxoma. (10) Fibroma, varying in character and including the neurocytomas, neuroblastomas, ganglioneuromata, and neurofibromata. (11) Dermoid (ten cases seen), difficult of removal because nearly always inflammatory. (12) Carcinomas, which are no longer rare.

"Surgical Indications and Technic." By Stuart Harrington, M.D., Mayo Clinic, Rochester, Minn.—The seeming increase of tumors of the mediastinum is perhaps due to improved diagnosis. Early recognition leads to treatment, x-ray and radium having been the methods most commonly employed. These have produced improvement or delay except in the benign tumors and the adenocarcinomas, in which groups a lack of response is frequent. In 1929, the speaker treated surgically seventeen cases, removing the growths by the transpleural operation. In the four preceding years, seven cases were operated on, making a series of twenty-four. The general examination is the important deciding factor for treatment. The site and impairment of respiration should be ascertained. X-ray is most important for diagnosis and differentiation and of equal value is intratracheal and positive pressure anesthesia. Anterolateral and oblique films are taken. A bronchoscopic examination is made and exploratory thoracotomy may be helpful. There is danger of pulmonary collapse and mediastinal flutter and a technic is being developed wherein it is most important that strict attention be given to minutest details. Preliminary artificial pneumothorax is established several days prior to the operation and the patient is given three liters of fluid daily. Ethylene and ether with intratracheal insufflation and with positive pressure is the method of anesthesia and the lung is ventilated and circulation reëstablished every five minutes. Suction is used for mucus. The surgical approach depends upon the site—if attached to the chest wall, a thoracotomy at the attachment is used; if in the posterior mediastinum, through a posterior thoracotomy. In eighteen cases, the transpleural, one-stage operation was done. Pleural effusion is a common sequela. The aim of the first stage of a two-stage operation is to form adhesions which will wall off the site, but the risk is increased by danger of effusion. Two operative deaths occurred in the series, on the second and seventh day. Blood pressure is taken every five minutes, physiologic salt solution being given for a ten mm. drop, blood transfusion if the drop is greater. Body heat is maintained. For complicating dyspnea and cyanosis, the patient is placed in the oxygen chamber. Pleural effusion, a late complication in nearly all instances, requires aspiration. Five patients developed empyema and were given drainage by the closed method. Of twelve malignant growths, one patient died immediately after operation, and seven, later; of twelve benign tumors, one died postoperatively and eleven are still living. There is no relation between the degree of malignancy and the duration, and the operative results compare favorably with those of malignancy elsewhere. Pain is the most important subjective symptom.

Slides of patients treated, of pathologic specimens, and of operative technic followed.

In discussion, Dr. George E. Pfahler expressed the indebtedness of the audience to the speakers. The symptoms are pain, if there is chest-wall involvement, and pressure upon the esophagus, the trachea, and the blood vessels. Benign tumors can be successfully removed and some success has been obtained in the treatment of malignant tumors with radiation. A distinguishing feature is presented in the x-ray film, in that malignant tumors are invasive, with indefinite outline, while in the benign growths, the outline is definite, with tendency to push other tissues away, and by pressure, to cause necrosis of the bone.

Slides of mediastinal cases seen by Pfahler were shown: (1) A large lipoma. (2) Aneurysm with rigid wall (diagnosed by bruit). (3) Hodgkin's disease, which disappeared after x-ray treatment. (4) Tumor pressing on blood vessels of neck. (5) Tumor pressing on trachea. (6) Malignant growth, improved by the x-ray, but with later recurrence.

Dr. George P. Müller also commended the work of the speakers of the evening. Care and thought is needed both in diagnosis and in technic and it pays to watch the patient for a while before operating. Accurate localization is essential and drainage of the wound should be avoided because of danger of infection by the skin staphylococcus. The oxygen tent should be ready for cyanosis. Slides were shown and five case reports were given.

(1) A woman, 36 years old, complained of a smothering sensation behind the sternum, with colds and dyspnea. There was occlusion of the trachea by a large chondroma, degenerated in the center, with lung adherent. Recurrence ensued and subsequent operation disclosed a myxoma. (2) A woman, 36 years old, with attacks of dyspnea, refused an operation until marked dyspnea set in, and then died of shock following removal of a fibrolipoma the size of a grapefruit. (3) A woman, complained of nausea and vomiting. Her symptoms did not improve after the removal of a cellular fibroma from the left apex. (4) A woman, complaining of dyspnea, gave a history of removal of sarcoma of the labia, in 1924 and 1927. In 1928, pain developed in the right axilla and shoulder, with dyspnea, cough, and loss of weight. A tumor was diagnosed by the x-ray, compression of the trachea, and malignancy. A two-stage operation was made but, removal was incomplete, good recovery but recurrence and death in three months. (5) A man, 55 years old, had epigastric pain

and distress, but no chest phenomena. The abdomen was rigid and tender, but not distended. There was a slight fever. It was diagnosed as stone in the cystic duct, pancreatitis, etc., but with no diagnosis definite. The x-ray showed a large tumor of the chest, a lymphoma, invading the pericardium, resembling a dissecting aneurysm of the descending aorta and reminding the speaker of a case of acute pneumothorax opened for a perforating duodenal ulcer.

Dr. Hobart A. Hare said the x-ray has revealed that mediastinal growths are common, for whereas but five hundred and thirty-seven cases were reported by the eighties, that many are now published in a year. The oblique or lateral x-ray is invaluable. It is important for the practitioner to remember that an aneurysm shows no signs of infiltration, while in malignant cases we find fingerlike projections of extension. When there is in an aneurysm a heavy, laminated clot, there will be no fruit or pulsation. Much of the symptomatology of these tumors depends on their position and it is important to remember that bloody fluid obtained from a chest is usually an evidence of malignancy.

March 26, 1930

PUBLIC HEALTH DAY

James M. Anders, M.D., Chairman of Public Health Day Committee.

"The Common Cold."—Peter K. Olitsky, M.D., Rockefeller Institute, New York City.—There are many different kinds of colds. There are those which result from exposure, or chilling of the body, from fatigue, or from disturbed metabolism. There are others arising from inhalation of irritants, and still others from hay fever and allied conditions. In addition, a cold may be a symptom of the onset of an infectious disease, such as measles, scarlet fever, etc. The cold which Dr. Olitsky discussed is ordinarily designated as *common cold,* is infectious, and occurs in epidemic form and is a disease in itself.

With respect to its causation, many bacteria have been brought forward at one time or another as the incitant of the disease. The speaker studied the problem from 1919 to 1923 and came to the conclusion that a condition similar to common cold could be transmitted from man to man with the filtered nasal and pharyngeal washings of early cases of the disease. The active filtrates were free from ordinary bacteria. Recently Dr. Dochez and his coworkers at the Medical Center, New York City, employing the ape instead of man as the experimental subject, concluded that bacteria-free filtrates of the nasopharyngeal washings from man could induce an infection in the anthropoids similar to common cold in man. The active agent of the secretions may, therefore, be a true filterable virus or a filter-passing microörganism.

Dr. Olitsky expressed the hope that the intensive work being done in various laboratories will shed more light on the subject and that in the future the vexing problem of the precise nature of the incitant of the common cold will be solved.

Dr. Dean F. Smiley, medical advisor of the department of hygiene and preventive medicine, Cornell University, Ithaca, N. Y.—It is a common observation that the incidence of common cold is greatest in the dark, cold months—December, January, February, March. This is because of poor ventilation, faulty nutrition, and lack of sunlight. The atmosphere of the college lecture room is hot, dry, and still and contains droplets from the noses and throats of the occupants. The temperature is 70° F. and the relative humidity is twenty-five per cent or less. Outdoors, the temperature may be 20° F. and the relative humidity seventy per cent. This quick change from one condition to another causes in the students swelling and paling of the mucous membranes and decrease in the immune bodies in the blood. Lowered alkaline reserve is apt to result from a diet served during this period and canned vegetables, stall-fed cows' milk, and winter eggs are low in vitamins. The relation of a higher blood sugar, too, is suggestive. Away from sunlight, the skin becomes pale, rough, and sensitive to air changes. Twenty-three per cent of the college students are susceptible to winter colds. Proper ventilation lowered the incidence, as did, also, education along the lines of diet, alkali reserve, and the use of the handkerchief for coughing or sneezing. Weekly irradiation with ultraviolet light caused a drop of forty per cent in the incidence of colds in the susceptible group. Therefore, at Cornell, each freshman in the hygiene course is given a full explanation of the importance of being in moist, moving, cool air; of the infective nature of nose and throat secretions, and of the proper balancing of his diet. A solarium, accommodating ninety students, for ultraviolet irradiation with quartz or carbon arc lamps is offered for weekly use at a nominal fee. Powders containing equal parts of sodium bicarbonate and magnesium carbonate are dispensed, with directions to take a teaspoonful twice daily for three days for running nose. A record is kept and the student is given special examination if he shows an abnormal cold incidence.

Dr. Edward L. Bauer, Department of Health, Philadelphia.—A concerted action is needed to minimize the incidence of common cold, but the public is usually indifferent to a problem until a catastrophe occurs. It must be educated to fear the disease before its interest is aroused. Cause of common cold may be divided into bacterial infection, chemical or mechanical irritant, and sensitivity to proteins. Collateral infection of the larynx, tonsils, bronchi, etc., is often included with common cold and in the tuberculous, the cardiac, and the renal patient, colds may have a severe effect. Predisposing causes are draughts, chilling, sudden changes in temperature, inadequate protection from clothing, or what is frequently overlooked, overdressing. Kissing, common drinking cups, towels, food, fingers, dust, overcrowding, all play their part. The freedom of the individual makes public health action difficult, but the Department of Health is endeavoring to disseminate knowledge on the subject and to enforce health laws. Public agencies must help popularize the use of the handkerchiefs, self-imposed isolation and early medical aid. Public opinion is an aid in enforcing the anti-spitting law. Rosenau goes so far as to advise reporting and quarantining for a cold. Serum therapy and carriers may become a public health problem. More stringent enforcement of existing statutes would be beneficial.

Mr. Harold H. Keller, medical department, Bell Telephone Company, Philadelphia.—In the Bell Telephone Company, medical problems are viewed from the standpoint of both employer and employee and the importance of health work has been increasingly recognized during the past ten years. One in three deaths in the United States is preventable. Industries recognize that health is a saleable commodity. In Pennsylvania and Delaware the Bell Telephone Company employs 23,500 persons, 15,000 of whom are women. A well-organized health department has been established with an aim to serve as a diagnostic clinic, coöperating fully with the employee's family physician. The effects

of the common cold on the telephone industry are more disastrous than in some lines of work. No statistics are kept unless a week is lost from work. In a three-year period ending June, 1929, approximately fifty per cent of the illnesses among the men and forty-eight per cent among the women were due to seasonal infections of the upper respiratory tract and, of the total time lost, about thirty per cent was due to the common cold or its results. An equal percentage of the cost of illness to the company in benefits paid was for this disease. The Bell Telephone Company is trying to put over a health education campaign. In 1923, it established a general health and first-aid course for women, and in 1929 a more advanced nutrition course. The influence of diet upon fatigue, efficiency, etc., and the importance of inheritance and health habits are stressed. Compulsory first-aid courses are given men in the plants. Bulletins dealing with habits of living are frequently issued; leaflets are inserted in the pay envelopes; in each issue of the company magazine there appears a health article, and a booklet has been published on "Good Health, How to Keep It." Good hygienic conditions for work are maintained. In 1929, a doctor and nurse visited the offices daily and gave 63,000 prophylactic nasal spray treatments to 7000 employees. Rest homes for convalescent employees are maintained. The keyword of the modern health movement is education.

Dr. John A. Kolmer, professor of pathology and bacteriology, Graduate School, University of Pennsylvania.—The responsibility of the common cold should be fixed upon the individual rather than on the community. The problem would be much simpler if the cause were known or if wholesale vaccination were possible. We need a wider dissemination of information. While it may be due to a filterable virus, Kolmer believes it is probably due to bacteria, but the important factor is not so much the germ as the resistance of the mucous membrane of the upper respiratory tract. We carry in our noses the potential cause of common cold, it is our resistance or immunity that is important. The common cold is important from the economic standpoint and also because it predisposes to more serious conditions, e. g., tuberculosis, pneumonia, chronic sinus disease, etc. Subjects liable to cold should take particular precautions and realize their individual responsibility, consulting a physician if colds are frequent. A goodly percentage can be helped by properly prepared autogenous vaccines, but the community vaccine should not be used.

April 9, 1930

Symposium on Epilepsy

"Considerations of the Convulsive State." By Temple Fay, M.D.—This symposium deals primarily with epilepsy and the recent work in its physiology and biochemistry and new considerations regarding the pathology and encephalogic findings. The present method of control of major seizures has been tried over a period of three years and found practical, safe, and effective. There are three schools of thought in consideration of the grand mal seizure—the French, who believe it is caused by a toxic substance; the physiologic (adhered to at Harvard); and the water metabolism theory, with studies of the effects of disturbances of this metabolism. The work presented comes as a result of the combined schools, having been undertaken under the guidance of Spiller, in 1927, and in association with neuropathologists, roentgenologists, Strecker, and Bauer. Old records exist on this subject, the Talmud referring to "falling disease" and presenting laws regarding personal hygiene. Hippocrates noted that the brain in these patients is exceptionally moist; Aurelius Celsis, in 25 A.D., prescribed fasting; and in 1630, in France, dehydration was advised. Years ago the operation of fenestration was employed to allow relief from the unusual amount of fluid over the cortex. In uremia and eclampsia there is a similar overfilling of the arachnoid spaces with fluid. In typical epilepsy, in the chronic epileptoid, or in acute convulsive seizures there is a hydrated state of the brain and a fulminating explosion. The motor cortex must be normally functioning to produce this. Convulsive states, therefore, do not present a disease process, but comprise a symptom complex. In 1927, an effort was made by the writer and his associates to reduce the fluid over the cortex. Recent physiologic work by Weed, Roundtree, Pollack and Davis, Ravkin and Ravkin, and others indicates the logic of the procedure. The cerebrospinal fluid is produced in amounts of from fifty to three hundred c.c. per day, in the choroids of the ventricles and passes around the base then up, anteriorly, over the motor and frontoparietal regions and is eliminated through the pacchionian bodies, a course clearly demonstrated in the encephalogram. It is in the pacchionian bodies that we hunt for, and find, pathology.

"Encephalographic Findings." By Eugene Pendergrass, M.D.—The encephalogram is made with the patient in the upright position, with the head in various angles, after drainage of the cerebrospinal fluid and introduction of air. This was begun in 1919 by Dandy, of Baltimore. It is indicated in all cases in which the symptoms are obscure and the neurologic examination is negative, e. g., injuries, birth trauma, epilepsy, hemiplegia, thrombosis, and inflammatory conditions. It is contraindicated if the spinal fluid pressure is twenty mm. or above and should always be preceded by a careful neurologic examination to eliminate possibility of abscess, arachnoiditis, or tumor. Lantern slides demonstrated the talk and depicted x-rays in cases of brain atrophy, with dilated subarachnoid spaces, brain aplasia, etc., and the circulation of the cerebrospinal fluid.

"Neuropathologic Findings in Epilepsy." By N. W. Winkelman, M.D.—This subject has been considered from the pathologic angle for many years. The Munich school has published a number of works on the problem and by them it has been demonstrated that findings identical with those of epilepsy have been found in other conditions. This was demonstrated also by the speaker in a case in 1927 of a patient dying from food poisoning. Slides illustrated the paper from this point. The pacchionian bodies have the same structure as the subarachnoid spaces and in convulsive cases show fibrosis. The brains are wet, hydrated, with aplasia and atrophy, though the changes in the brain in epilepsy are secondary, because of the periodic anoxemia. Drainage of the brain is important in explaining the clinical manifestations in the convulsive state.

"Therapeutic Effect of Dehydration." By Temple Fay, M.D.—Applying the principles, then, we find that convulsive states have in common the factor of hydration. That the spinal fluid eliminating mechanism is not alone responsible, is demonstrated by the fact that eighteen to twenty per cent fail to show pathology in the pacchionian bodies. Only twenty per cent of epileptics have a hereditary background. Deficiency in venous drainage is present in a certain percentage, and this affects both cerebrospinal fluid drainage and brain

pressure. Stenosis of the lateral sinuses has been noted and it has been physiologically demonstrated that an abrupt change of intracranial pressure results in a seizure. On the theory that an alkalosis occurs before an attack (unconfirmed), a ketogenic diet was urged, and though from thirty to thirty-three per cent improve on this diet, this improvement is due to diarrhea, acidosis, loss of weight, ketosis, and dehydration. In 1924, Gamble, Ross, and Tisdale put a patient on a starvation diet with a definite amount of fluid, balancing the fluid output and intake. The cerebrospinal fluid is the largest reservoir and the periodicity of attacks could be synchronized with increased water storage. If the spinal fluid is increased or if there is volume displacement, the primary circulation and later the brain are involved. In the epileptic, the intracranial pressure averages 13 (normal, 8) and fluid predisposes the patient to an attack. True, the convulsive seizure is not understood, but it is known that patients on limited fluid and strict diet show a decrease in the grand mal attacks. Petit mal is not affected. We have here a symptom complex similar to that in diabetes, in which with the food balanced, the patient is sugar free. In grand mal, if the fluid balance is maintained there are no seizures, but an immediate return occurs upon imbalance. Dehydration is never a cure, merely a temporary relief, and depends for its success upon the coöperation of the patient. One patient of the speaker's, previous to treatment begun in May, 1927, had from nineteen to twenty-five seizures each month. In the last three years he has had but three major attacks, each occurring when an attempt was made to raise his water level above twenty-two ounces per day. Charts of twenty-two cases illustrated the treatment. In summary, hydraulic factors applied to the cortex predispose to grand mal. Warning is given that tedious patience is required, as in the treatment of diabetes, without insulin.

In discussion, Dr. Wm. G. Spiller commends this serious, scientific attempt to determine the cause and treatment of epilepsy. The usual treatment has been general hygiene, regulation of the gastro-intestinal tract, regulation of diet, and the use of bromids, luminal, etc., to lessen the activity of the cerebral cortex. Dr. Fay is a pioneer in the regulation of fluid intake and output. The treatment is a difficult one to carry out for the dispensary and ward patients cannot understand and the indulgent mother is likely to slip. Good results are obtained if this treatment is properly carried out. Biochemistry plays an important rôle in dehydration.

In many cases atrophy in the frontoparietal region is demonstrable, and Winkelman has called attention to the swelling of the cells of the small vessels of the brain, causing anoxemia.

Dr. Edward L. Bauer believes that, from the clinical standpoint, results of dehydration bring relief of grand mal in children and may prevent deterioration. It is hard to control children, for fluids must be measured. In institutions this is not difficult, and he has approximately eighty-six cases under observation, nine cases for three years, with no attacks except those which were deliberately induced by excess intake. A sudden cut in fluids is unwise and diet should consist of meat, eggs, vegetables, thick cereals, some stewed fruit, some milk, and a few sweets, but no soup. Additional fluid may be allowed if there is much perspiration. Some children can be raised in fluid intake after several months. It is a treatment worth trying. The child should not get overweight.

Mary A. Hipple, M.D., *Reporter.*

WARREN—APRIL

The April meeting was held at the Warren State Hospital, and Dr. Maxwell, of Erie, presented an interesting study on the differential diagnosis of common lesions in the right of the abdomen. He brought out various points which would distinguish salpingitis from appendicitis and appendicitis from peritonitis, and then the diagnosis between peptic ulcer and cholecystic disease, and finally the difference between lesions of the kidney and ureter and appendicitis. He illustrated his paper by numerous radiographs, showing how by examination of the ureter and pelvis of the kidney obscure cases often may be cleared up. Lesions of the kidney and right ureter cause symptoms that strikingly resemble appendicitis. Acute chills are very rare in appendicitis but common in kidney and bladder conditions. The pain in the latter is often referred to the ureter and may be coliclike in its nature. High fever with dysuria and hematuria will distinguish some of the kidney cases from appendix trouble. In ulcer of the duodenum, the dominant symptom is pain, coming on periodically with sour eructations, and this pain is relieved by food and alkalis, but we must remember that a ruptured ulcer may send fluids into the lower right of the abdomen and give symptoms simulating a ruptured appendix. Ulcer is three times more common in males than females, and is apt to occur in an undernourished individual. Cholecystic disease, on the other hand, is three times more common in females than in males and usually in middle-aged persons, and seventy per cent of the trouble is accompanied by stone. When infection sets in, we may have other kinds of symptoms to mask the conditions, especially severe gastro-intestinal symptoms. Ninety per cent of all cases of peptic ulcers can be diagnosed through the x-ray and dye test. Dr. Lick gave many other useful hints for making a diagnosis in these various diseases of the right abdomen, but he stressed the point of taking careful and complete histories and not depending on some one symptom. He gave a number of case histories showing how mistakes can happen, especially if examination of the renal system has been neglected. In the discussion it was brought out that pyelitis and some other infections of the bladder and kidney that were common in former years were recognized and treated successfully without the help of the laboratory and x-ray, and that some times manipulation, such as the use of a catheter and lavage of the kidney, only increases the danger.

The hospital staff entertained the physicians at supper. Twenty members were in attendance.

M. V. Ball, M.D., *Reporter.*

The serious and even fatal results which sometimes follow slight injuries are well known to all who have observed the practice of our large out-patient departments and dispensaries. The strange part of it is that physicians do not take better care of themselves; the very men who are most familiar with these facts and are most exposed by constantly coming in contact with all manner of pathogenic bacteria, are often the most careless. Every medical man certainly owes it to himself and to those possibly dependent upon his life and labor, to keep in mind the serious cases of septic infection which are so common in our profession, and to disinfect carefully and protect even the slightest scratches.

The Woman's Auxiliary to the Medical Society of the State of Pennsylvania

MRS. WILDER J. WALKER, *Editor*
546 South Street, Greensburg, Pa.

THE MONTHLY MESSAGE OF THE PRESIDENT

DEAR AUXILIARY MEMBERS:

As to news, I have quite a budget this month, and am glad to start with the announcement of the election of our new recording secretary, Mrs. Joseph A. Stackhouse, of Erie, whom many of you will remember with pleasure as the capable and dependable chairman of the Program Committee last fall, and who is now president of the Erie Auxiliary. I am glad also to announce the appointment of Mrs. Wilmer Krusen, president of the Philadelphia Auxiliary, whom Mrs. Hunsberger has chosen as her successor in the chairmanship of the Committee on Public Health Education. Mrs. Krusen needs no introduction to a Pennsylvania organization. We are fortunate indeed to have her wise counsel on the Board.

Next comes an important piece of business, the proposed revision of the constitution. This has now been approved by the Board and sent to each county auxiliary for study and action before it is submitted to the general meeting in Johnstown on Wednesday, October 8. Delegates should come fully instructed to vote on each clause in accordance with the wishes of their own auxiliary. With a few unimportant changes, the Board approved by a very large majority the draft submitted, and the committee are to be congratulated on their efficient labors—Mrs. Kech (Blair Co.), Mrs. Hunsberger (Montgomery Co.), Mrs. Johnston (Allegheny Co.), Mrs. Horger (Lackawanna Co.), Mrs. Allyn (Philadelphia Co.), chairman.

Word comes from Dr. Theodore B. Appel's office that the State Health Cars will visit the following counties next summer: Armstrong, Cumberland, Erie, Greene, McKean, Schuylkill, and Washington. Full details of their itinerary, dates, etc., may be obtained from Dr. Mary Riggs Noble, Department of Health, Harrisburg. No need to point out to you what a splendid chance this is for the auxiliaries to coöperate with the Health Authorities by rounding-up the children and delivering them at an appointed time and place for examination. I sincerely hope that we may give a brilliant demonstration of our importance and usefulness by making the most of this opportunity.

Plans for the annual meeting of the national auxiliary in Detroit, June 23 to 27, come on apace. The new national by-laws designate the committee in charge as the "Social" Committee, which really moves one to mirth. The auxiliary as an organization is occupied only with its own business affairs, and the committee members work like dogs, and have nothing whatever to do with any social gatherings, except the official auxiliary luncheon. Its members are Mrs. William Gerry Morgan (D. C.), Mrs. Olin West (Ill.), Mrs. L. T. Harris (Mich.), Mrs. Walter Jackson Freeman (Pa.), and Mrs. Southgate Leigh (Va.), chairman. Mrs. Basil Loren Connelly is chairman of the Detroit committee for the convention proper; and Mrs. Burt Russell Shurley, of the social activities.

Pennsylvania is entitled to seventeen delegates and seventeen alternates, and you will find below the list of the women who have thus far consented to represent us. With the national president-elect and three other members on the national board—Mrs. Babcock, Mrs. Forcey, and Mrs. Freeman—we shall have thirty-eight members officially in Detroit, in addition to the many who will go simply as auxiliary members.

All railroads offer special convention rates. Hotel headquarters are at the Hotel Statler, where prices start at $3.00 per day per person. Pennsylvania will have a private parlor at the Statler which all members of the auxiliary are invited to use for conference, rest, and meeting their friends. The chairman of the Hotel Committee is Mrs. Roland E. Loucks, 377 W. Grand Blvd., Detroit.

The roof garden of the Hotel Tuller, next to the Statler, will be headquarters for all auxiliary business—registration, meeting, etc., and the auxiliary luncheon on Tuesday, June 24. There will be no registration fee, but members will buy their own luncheon tickets which cost $1.50. The registration bureau will be open Monday, Tuesday, and Wednesday, June 23, 24, 25, from 9 a. m. to 4 p. m.; and on Thursday and Friday, June 26, 27, from 9 a. m. to 12 m. Programs, badges, etc., may be procured here, and invitations, tickets, and transportation cards must all be procured here in advance, as only programs may be procured elsewhere.

The meetings, as you all know, are open to every woman attending the convention, and under Mrs. Hoxie's and Mrs. Hunsberger's leadership they are bound to be well worth the trip. There will be three morning sessions, Tuesday, Wednesday, and Thursday, June 24, 25, 26. The afternoons and evenings are all left free for sight-seeing and social activities, for which many plans are in the making.

Details have not yet been announced, but they include motor and boat excursions, and visits to some of the handsome private estates in the environs, including that of Mr. Henry Ford. The Detroit Museum of Art is among the best in the United States. No parties have been scheduled during business hours.

No one may represent her state in any capacity whose dues are not fully paid. The chairman of the Committee on Credentials and Registration is Mrs. Ledru Otway Geib, 3860 St. Clair Ave., Detroit.

Only delegates may take an active part on the floor of the convention, but alternates should attend all sessions and hold themselves in readiness to take their delegates' places if necessary. All resolutions must be in writing and signed, and in the hands of the committee twenty-four hours before the session at which they are to be presented. Mimeographed copies will be distributed as the delegates take their seats. The chairman of the Committee on Resolutions is Mrs. Augustus S. Kech, 218 Logan Ave., Altoona, Pa.

In closing let me remind you once again that our own dear Mrs. Hunsberger will take office at this meeting in Detroit, and that we want to show the world how proud and loyal we are. Let us all make a special effort in her honor, not only to attend the convention, but to make our influence felt in promoting in every possible way the purpose for which we are organized—health for the nation.

Faithfully yours,
Corinne Keen Freeman, *President.*

PARTIAL LIST OF DELEGATES AND ALTERNATES AS OF APRIL 15

Members of the National Board: Mrs. W. Wayne Babcock, Mrs. Charles B. Forcey, Mrs. Walter Jackson Freeman, Mrs. J. Newton Hunsberger.

Mrs. Theodore B. Appel (Lancaster Co.), Mrs. William J. Armstrong (Butler Co.), Mrs. Andrew L. Benson (Clearfield Co.), Mrs. Rufus Edward Brock (Greene Co.), Mrs. Edgar S. Buyers (Montgomery Co.), Mrs. Charles W. Eisenhower (York Co.), Mrs. Cecil F. Freed (Berks Co.), Mrs. Howard C. Frontz (Huntingdon Co.), Mrs. Ulrich Peter Horger (Lackawanna Co.), Mrs. Leslie L. Hunter (Beaver Co.), Mrs. Augustus S. Kech (Blair Co.), Mrs. J. DeWitt Kerr (Lebanon Co.), Mrs. David B. Ludwig (Allegheny Co.), Mrs. Edward Lyon (Lycoming Co.), Mrs. John F. McCullough (Allegheny Co.), Mrs. Joseph J. Meyer (Cambria Co.), Mrs. George W. Miller (Montgomery Co.), Mrs. Edwin A. Nicodemus (Dauphin Co.), Mrs. William Burrill Odenatt (Philadelphia Co.), Mrs. Richard Owen (Delaware Co.), Mrs. William E. Parke (Philadelphia Co.), Mrs. Robert L. Schaeffer (Lehigh Co.), Mrs. Charles I. Shaffer (Somerset Co.), Mrs. James H. Shannon (Washington Co.), Mrs. William T. Sharpless (Chester Co.), Mrs. Charles H. Smith (Fayette Co.), Mrs. Charles J. Stambaugh (Mifflin Co.), Mrs. James D. Stark (Erie Co.), Mrs. David W. Thomas (Clinton Co.), Mrs. W. Gilbert Tillman (Northampton Co.).

COUNTY AUXILIARY REPORTS

Allegheny.—Dr. J. Allen Jackson opened his talk to the auxiliary, on March 25, with the statement, "Mental health is that sense of mental well-being which enables one to adapt himself to an ever changing situation and to experiences, with satisfaction to himself and to those with whom he lives and labors. Suppression of a desire to talk of a mental worry is devastating. A frank confession is the most beautiful mental drainage known."

To the wives of the physicians of Allegheny County, Dr. Jackson brought this message: "Interest your husbands in mental health; interest yourself in mental clinics; interest yourself in the mental health of those with whom you come in contact; avoid worry, strain and anxiety; alcoholism, tuberculosis, and nephritis. Live clean; rest; relax; and recreate."

Following Dr. Jackson's address, Mrs. Elsie Breese Mitchell sang two groups of songs.

Beaver.—The auxiliary was entertained, April 8, at the home of Mrs. L. L. Hunter, president, at Midland. Reports of dental clinics were given by Mrs. P. Smith (Ambridge), Mrs. R. F. Javen (Rochester), and Mrs. I. C. Duncan (Beaver Falls). After the usual business meeting, Regina Louise and Eleanor Claire, small daughters of Dr. and Mrs. J. A. Helfrich, of Midland, read several selections which were enthusiastically received, and tea was then served.

Butler.—On January 29 the auxiliary held a luncheon in honor of Mrs. Freeman, who gave a very interesting talk.

The auxiliary held its regular quarterly meeting on March 11. The following officers were elected for the ensuing year: president, Mrs. J. D. Purvis; vice-president, Mrs. J. V. Cowden; secretary, Mrs. E. R. Simpson; corresponding secretary, Mrs. E. L. Wasson; treasurer, Mrs. R. M. Christie; *Hygeia* chairman, Mrs. W. J. Armstrong.

A committee was appointed by the president to take up dental clinic work with Dr. Christie, of our county.

Dauphin.—The March meeting was the annual birthday party of the auxiliary. Each member celebrated her own birthday by bringing a sum of money to be contributed to the Medical Benevolence Fund. In accordance with the recommendations of our State officers, all members of the auxiliary are being urged to have a health examination. In order that no member be allowed to forget, there was a table at this meeting at which each member who had been examined was asked to register. We have followed Mrs. Freeman's suggestion that societies preserve their records, and a Year Book for Dauphin County has just been published. Each member was given a copy at this meeting.

Lehigh.—The March meeting of the auxiliary was held at the Hotel Traylor, with Mrs. Charles Fox, the president, in the chair. After a lengthy business meeting, Miss Ethelyn Anderson of the Allentown Hospital gave an interesting talk on obstetrics.

Lycoming.—A luncheon meeting was held, March 14, at the Woman's Club. A business meeting followed with Mrs. W. S. Brenholtz presiding.

A report of the card party held recently by Mrs. John B. Nutt and Mrs. George R. Drick for the benefit of the auxiliary was given showing that a large sum

had been realized from the party. The proceeds will be applied to the auxiliary's hospital fund.

Health education was discussed, and work in this line will be guided by the Medical Society.

Mrs. L. E. Wurster invited the auxiliary to hold a card party in her new home immediately following the Lenten season.

Northampton.—The March meeting was held at the Pomfret Club, Easton, with Mrs. W. G. Tillman, the president officiating. After luncheon, there was a short business session, and then bridge was played. The hostesses were Mrs. Elmer J. Deck and Mrs. Clarence D. Hummel. The April meeting will be held in Bethlehem. At this meeting a novelty sale will be conducted by the ways and means committee and guest speakers will be present.

Philadelphia.—The stated meeting of the auxiliary was held March 18, in the auditorium of the Society Building, with Mrs. Wilmer Krusen presiding. Mrs. J. C. Applegate was appointed registrar. The nominating committee consists of: Mrs. Daniel Longaker, chairman, Mrs. J. M. Fisher, Mrs. F. S. Baldi, Mrs. J. C. Applegate, and Mrs. David Mackey.

An interesting program was provided by the following speakers who were presented by Mrs. M. G. Tull, chairman of program, of the Civic Club: "Stream Pollution," Miss Katherine Brinley; "Cleaner Philadelphia," Miss Frances Wister; "Contributions to the Care of the City's Health," Mrs. Ketterer; "The Common Cold," Dr. Wilmer Krusen. A social hour followed.

Somerset.—The auxiliary met in regular session, January 21, and the following officers were elected: president, Mrs. J. Ross Hemminger, Somerset; first vice-president, Mrs. Carl W. Frantz, Confluence; second vice-president, Mrs. J. M. James, Hooversville; secretary, Mrs. G. A. Noon, Listie; treasurer, Mrs. Bruce Lichty, Meyersdale.

The election was followed by a round-table discussion after which the auxiliary was invited to join the Medical Society at the Park Theater and hear a very interesting and instructive talk, illustrated with lantern slides, and given by Dr. Harry Tolson of Cumberland, Md.

On February 1 the auxiliary entertained with a beautifully appointed luncheon at the Ferner Hotel in honor of Mrs. Freeman. Other guests present were Mrs. Joseph J. Meyer, our district councilor, of Cambria County, Mrs. R. M. Palmer, and Mrs. C. M. Harris of Johnstown.

After the luncheon, Mrs. Freeman addressed the meeting. Short talks were given by the other guests, these were followed by a round-table discussion.

The regular March meeting was held on the eighteenth, at the home of the president, Mrs. J. Ross Hemminger. After luncheon the regular business was taken up. Four new members were received. Plans were made for a card party, the proceeds of which are to be given to the Medical Benevolence Fund.

Washington.—On April 9 the auxiliary met in the Nurses' Home of the Washington Hospital. It was the annual meeting and was set aside as a Public Health Meeting, to which members of all civic and public welfare organizations were invited. Each member was requested to bring two guests. The program consisted of short talks illustrated by lantern slides, which stressed public health projects and work being done in this community.

Westmoreland.—The regular monthly meeting was held, April 2, at the Latrobe Country Club, with twenty-five members present. The Club was decorated with spring flowers and a delicious luncheon was served. The regular business meeting followed, during which delegates were elected for the State meeting in October. Delegates: Mrs. J. S. Silvis and Mrs. C. E. Snyder. Alternates: Mrs. D. A. Walker and Mrs. U. H. Reidt.

A Public Health meeting is arranged for May.

We are very happy to have one of our members, Mrs. Moran, who has been ill for a year, back home in good health.

York.—The auxiliary held its January meeting at the home of Mrs. C. W. Eisenhower. Mrs. Walter J. Freeman was the guest speaker. The following officers were elected for the year: president, Mrs. C. W. Eisenhower; first vice-president, Mrs. L. S. Weaver; second vice-president, Mrs. Jas. F. Wood; corresponding secretary, Mrs. Chas. May; recording secretary, Mrs. P. A. Noll; treasurer, Mrs. E. P. Flanders; directors, Mrs. B. E. Gamble, Mrs. E. S. Stambaugh, Mrs. J. C. Atkins, and Mrs. G. E. Spotz.

A card party will be given soon for the Benevolence Fund.

A colonial tea was held on March 18 from 2 to 4 p. m. at the home of Mrs. Camilla Steig Treible. The corridors, stairways, and rooms of the house were decorated with antiques. The women were dressed in costumes of colonial days with powdered hair and curls; music of the early American composers was sung and soft candle light lent a touch of by-gone days to the scene.

In the center of the studio was an old drop-leaf table, on which there were a candelabra with prisms, a bowl of red, white, and blue flowers, and at each end, an old tea service. On the wall were pictures of George and Martha Washington with the American flag hung between. Pouring tea were Mrs. H. D. Smyser, Mrs. L. S. Weaver, and Mrs. J. P. Paul. The guests were met by a colonial butler, Henry Lichtenberger, dressed in a suit of bright green satin, with yellow silk stockings, black buckled shoes, and powdered hair. Mrs. Dorothy Moore in a gown of white satin, Mrs. Walter Black in a lavender dress and white lace cap, and Mrs. Warren Seiker in lavender silk and hoop skirt ushered the guests to the studio where Mrs. Treible received them.

Medical News

Deaths

Mrs. Ella R. Hoban, wife of Dr. Charles J. Hoban, of Philadelphia. March 28.

William Wallance, M.D., of Philadelphia; Jefferson Medical College, 1894; March 12.

Mrs. Ida Mary Greenwald, mother of Dr. Joseph Greenwald, of Darby; aged 56; March 29.

Albert Gelblatt, son of Dr. and Mrs. Samuel Gelblatt, of Philadelphia; aged 16; April 18.

Howard W. Long, M.D., of Philadelphia; Hahnemann Medical College, 1877; aged 74; April 6.

George B. Masters, M.D., of Macdonaldton; Medical College of Ohio, 1879; aged 74; April 10.

Joseph G. Harris, M.D., of Philadelphia; Medico-Chirurgical College, 1899; aged 59; April 17.

James H. Peterman, M.D., of Cherry Tree; Baltimore Medical College, 1895; aged 61; March 15.

Samuel A. Ruffner, M.D., of Kingston; Jefferson Medical College, 1890; aged 65; recently.

Maurice M. Denlinger, M.D., of Rohrerstown; Jefferson Medical College, 1890; aged 64; April 6.

Philip G. Sanderson, M.D., of Philadelphia; Chicago Homeopathic College, 1885; aged 85; April 7.

Marshall Reid Ward, M.D., of Wayne; Bellevue Hospital Medical College, 1887; aged 71; March 19.

John Dale, M.D., of Philipsburg; George Washington University Medical College, 1895; aged 65; recently.

William P. Harlos, M.D., of Altoona; University of Pittsburgh School of Medicine, 1905; November, 1929.

Leo N. Gartman, M.D., of Philadelphia; Jefferson Medical College, 1896; aged 65; March 30, of heart disease.

Leedom Sharp, M.D., of Intercourse; University of Pennsylvania School of Medicine, 1895; aged 70; April 10.

Franklin B. Scheirer, M.D., of Allentown; University of Pennsylvania School of Medicine, 1895; aged 62; March 30.

Martin C. Gaughan, M.D., of Pittston; University of Pennsylvania School of Medicine, 1906; aged 63; November, 1929.

Mrs. Charlotte G. Brady, widow of Dr. Franklin Brady, founder of Roosevelt Memorial Hospital; aged 69; April 14.

George M. McClellan Focht, M.D., of Lebanon; Hahnemann Medical College, Philadelphia, 1885; aged 67; April 1, of uremia.

Malcolm S. Councill, M.D., of Bryn Mawr; University of Maryland School of Medicine, 1896; aged 62; March 23, of heart disease.

Harry F. McDowell, M.D., of Franklin; University of Pittsburgh School of Medicine, 1895; aged 63; March 10, of heart disease.

Franklin B. Miller, M.D., of Pittsburgh; University of Pennsylvania School of Medicine, 1886; aged 71; April 3, of pneumonia.

J. Edward Wallis, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1884; aged 71; March 27, of heart disease.

Julia Hayward Slack, M.D., of Bristol; Women's Medical College, Philadelphia, 1895; aged 60; February 14, of acute subphrenic abscess.

John B. Miller, M.D., of Sligo; Jefferson Medical College, 1901; aged 56; April 4, of agranulocytic angina, complicated with pneumonia.

Francis A. McGrath, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1894; aged 57; March 21, of cerebral hemorrhage.

Mrs. Rosalie Wagner, widow of Dr. J. Nicholas Mitchell, at one time professor of obstetrics at Hahnemann Medical College; aged 75; April 1.

David Pellman Boyer, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1892; aged 55; March 23, of heart disease.

Albert W. Garren, M.D., of Philadelphia; Jefferson Medical College, 1896; aged 56; February 24, after devoting his life to teaching music.

Norval D. Marbaker, M.D., of Philadelphia; Boston University School of Medicine, 1921; aged 34; March 13, in Chicago, Ill., following an appendectomy. At the time of his death he was serving as assistant director of the Industrial Health Section of the National Safety Council. During the World War, Dr. Marbaker served with the medical units in the army, and following the war was employed as ship's surgeon in Central and South American waters. He was a member of McCall Post No. 20 of the American Legion.

Aime Leteve, M.D., French Counsel and former pupil of Louis Pasteur; aged 65; March 20, in Pittsburgh, after a lingering illness. Dr. Leteve arrived in New York from France in 1885 with Paul Gibier and started the Pasteur Institute of New York. In 1895, he moved to Pittsburgh and started a similar institute in connection with Mercy Hospital. For many years he was professor of special bacteriology at the University of Pittsburgh. He served for a long time as Acting French Consul in the Pittsburgh district.

Horatio Warren Gass, M.D., of Sunbury; Medico-Chirurgical College, 1898; aged 62; March 21, at the Mary M. Packer Hospital, of which hospital he was superintendent, after an illness of eighteen months. He first practiced at Mt. Ætna in Berks County, and in 1901 moved to Sunbury. He was jail physician, 1906 to 1908, and was medical examiner for a number of insurance companies. He was a zealous member of Friendship Hose Company, and was an active member of Milton Jarrett Norman Post, 201, American Legion. Dr. Gass was a past president of the Northumberland County Medical Society. During his tenure of office as superintendent of the Mary M. Packer Hospital the institution made its most rapid advances. He was active in all community agencies devoted to public welfare. He was a director of the North Branch Title and Trust Company, the Community Discount Company, and the Sunbury Industrial Corporation. He served two terms on the local board of education. Dr. Gass served in the World War with the rank of captain in the Medical Corps, and was assigned to the camp at Chattanooga. Dr. Gass became proficient in the x-ray field. Among the survivors is a son, Dr. Mark K. Gass, who is in active practice at Sunbury.

Births

To Dr. and Mrs. C. E. Ervin, of Danville, a son, recently.

To Dr. and Mrs. J. B. Johnson, of Ligonier, a son, recently.

To Dr. and Mrs. H. B. Anderson, of Johnstown, a daughter, February 26.

To Dr. and Mrs. Enrico G. C. Coscia, of Pittsburgh, a son, Richard Carl Coscia, April 5.

To Dr. and Mrs. Francis Wells Davison, of Danville, a daughter, Joan Dudley Davison, March 7.

Engagements

Miss Lydia Wister Tunis, daughter of Dr. and Mrs. Joseph P. Tunis, and Mr. Ernest Scott, all of Philadelphia.

Miss Joana Frances Mealey and Mr. H. Lawrence Davisson, son of Dr. and Mrs. Alexander H. Davisson, all of Philadelphia.

Miss Elizabeth Lean Fields, daughter of Dr. and Mrs. Joseph Head, of Philadelphia, and Dr. Ferdinand Fetter, of St. Paul, Minn.

Marriages

Miss W. Frances Bassler to Dr. Hobart W. Dodson, of Nanticoke, in March.

Miss Geraldine Girton to Dr. Harry Stober Carmany, of Philadelphia, April 23.

Dr. Adalyn Schoenfeld to Dr. Joseph C. Yaskin, both of Philadelphia, March 25.

Miss Christine Butler Harris to Dr. William Harding Kneedler, of Philadelphia, April 30.

Miss Katharine Adele McFarland, of Philadelphia, to Dr. Roy V. Gerkin, of New York, April 5.

MISS VIRGINIA NEWBOLD, of Jenkintown, to Mr. Samuel Y. Gibbon, son of Dr. and Mrs. John H. Gibbon, of Philadelphia, April 29.

Miscellaneous

DR. B. E. LONGWELL, of Johnstown, spent his winter vacation in Havana and the West Indies.

DRS. GEORGE E. DE SCHWEINITZ AND GEORGE C. STOUT, of Philadelphia, have recently sailed for Europe.

DR. S. IRA MCDOWELL, of York, recently returned from an extended trip to Caracas, Venezuela, and other South American points.

THE JEWISH HOSPITAL, Philadelphia, received $5000 under the will of Benjamin Wolf, manufacturer and banker, who died March 22.

AN AIRPLANE carrying 283 pounds of smallpox vaccine left Miami, Florida, on April 8, for Costa Rica, where there is an epidemic of smallpox.

A CHARTER was granted by the State Department, January 24, to the Reading Medical Arts Building Corporation, with a capitalization of $150,000.

THE LANKENAU HOSPITAL, Philadelphia, will receive $10,000 under the will of Mrs. Augusta Deitz, who died February 26, leaving an estate estimated at about $200,000.

CHARGED WITH drawing 8750 prescriptions for morphin in a year, forging the name of her physician husband, Mrs. Martha Boch, of Nazareth, was held under $500 bail for federal court on April 8.

A BANQUET was given by the Uniontown Hospital staff at the Uniontown Country Club, with Dr. John D. Sturgeon as the honor guest in celebration of the fiftieth anniversary of his medical practice.

A GROUP of noted Philadelphia neurologists attended a dinner of the Winkelman Neurological Society of the School of Medicine of Temple University, April 4, at the Hotel Pennsylvania. Dr. Temple Fay was toastmaster.

DR. L. M. HOFFMAN, of Williamsport, who is pursuing a postgraduate course in surgery at the Graduate School of Medicine of the University of Pennsylvania, has received an appointment as resident surgeon at the Postgraduate Hospital.

A JOINT MEETING of the New York and the Philadelphia Urological Societies was held March 24, at the Jefferson Hospital, Philadelphia. The program consisted of the presentation of papers, case reports, and new apparatus by members of the Philadelphia Society.

THE WILL of William Guy Worthington, of Philadelphia, leaves $32,000 in trust for his estranged wife, and $2500 to the Shrine Hospital for Crippled Children and directs that the principal of the trust fund is to go to the hospital at his wife's death.

THE WILL OF FRANCIS WISTER SHARPLESS, of Philadelphia, disposes of an estate listed at $500,000 and upward. Among the larger charitable bequests are those of $15,000 to the Episcopal Hospital, and $10,000 to the Pennsylvania Epileptic Hospital and Colony Farm, Oakbourne, Chester County.

PHILADELPHIA HAS BEEN ADJUDGED second honor city in the national interchamber health conservation contest conducted by the United States Chamber of Commerce. Detroit won first place. The Health Committee of the Philadelphia Chamber of Commerce is headed by Dr. Wilmer Krusen, former Director of Public Health of the city.

THE PHILADELPHIA STUDY CLUB OF DENTAL ECONOMICS conducted a day of clinics in dental economics, March 26. The cost of the course was $10. There were many interesting and helpful addresses and clinics for which there was no charge. Later in the year a complete economic course will be given for which the fee will be $50.

THE NATIONAL ARTS CLUB of New York City has recently announced a $3000 prize contest for the best literary work on "The Soul of America." The object of the award is to stimulate the writing of a work which will reveal the soul of America as distinguished from books in which the authors thoughtlessly praise or condemn the national character.

A TESTIMONIAL DINNER was given on March 13 in honor of the fiftieth anniversary of the graduation of Dr. George G. Harman, oldest practicing physician in Huntingdon County. The dinner was held at the J. C. Blair Memorial Hospital, Huntingdon. Twenty-two members of the county medical society were present. Dr. C. G. Brumbaugh acted as toastmaster.

THE UNIVERSITY OF MINNESOTA has published the preliminary program for a symposium on the "Kidney in Health and Disease," to be held at the University of Minnesota Medical School on July 7 to 18, 1930. Those interested in attending the symposium should direct their correspondence to the Symposium, University Hospital, Minneapolis, Minn.

AT A MEETING OF THE PHILADELPHIA COUNTY COUNCIL of the American Legion in March, in an effort to reach an agreement with city officials for the transfer of a plot of ground in the vicinity of League Island on which it is proposed to erect a new $3,000,000 naval hospital, Dr. A. C. Morgan was named by Commander Rosen to head a special committee to accomplish this mission.

THE PHILADELPHIA COUNTY MEDICAL SOCIETY has warned its members against a ring of blackmailers who are alleged to have obtained thousands of dollars of "hush money" from physicians by threatening to ruin their professional reputations, and have taken steps to protect the innocent physician who might be victimized. A number of arrests have been made.

AFTER A CAREFUL STUDY of the daily accidents in bathtubs, according to G. D. Newton, of the Travelers' Insurance Company, the American bath day has changed from Saturday to Sunday. During the week days the average is about the same, but on Sunday there is a great increase in the number; and unless Sabbath bathing brings some heavenly punishment it must mean that more persons bathe on that day than on any other day of the week.

DR. HOWARD A. KELLY, of Baltimore, Md., has recommended that the House of Representatives take favorable action on the bill to authorize the Bureau of Mines to manufacture one gram of radium for use in the United States Veterans' hospitals. Dr. Kelly claims that there are thousands of cases of cancer in this country which cannot be cured because of an insufficiency of radium. He said that there are only twenty grams of radium in the United States.

DR. JAMES E. TALLEY, of Philadelphia, was elected president of the Philadelphia Heart Association at the annual meeting on April 16. Dr. Talley is professor of cardiology at the Graduate School of the University of Pennsylvania. The principal address of the meeting was made by Dr. Edwin F. Maynard, chairman of the Cardiac Clinics Committee of the New York Tuberculosis and Health Association. He declared that in 1923 heart disease cost the country $1,500,000,000.

BEGINNING THIS YEAR the American Association for the Study of Goiter will award a cash prize of $300 annually for the best original thesis dealing with some aspect of the goiter problem. Theses should be submitted by June 1, to Dr. Walter M. Simpson, chairman of the Essay Committee, Miami Valley Hospital, Dayton, Ohio. The award will be given immediately following the coming meeting of the Association which is to be held in Seattle, Washington, July 10 to 12, 1930.

Prohibition Commissioner James M. Doran has announced, after testing more than one hundred samples of the Jamaica ginger drink which caused hundreds of cases of paralysis in the southern and southwestern states, that the concoction was found to be as poisonous as sheep dip. The poisons contained in the alcohol flavored with a thimbleful of Jamaica ginger were lysol and crude carbolic acid or creosote. Dr. Doran said that the product seemed to emanate from Cincinnati and St. Louis.

The new Quakertown Community Hospital was formally opened on March 31, with an official inspection of the building and a public meeting held in the high-school auditorium. The chief of staff of the hospital is Dr. Wilson S. Erdman, and the chief surgeon is Dr. D. K. Santee. Department heads include Dr. W. F. Weisel, chief of medical department; Dr. S. Mann Uhler, chief of eye, ear, nose and throat department; Dr. Thomas L. Smith, chief of x-ray department; Dr. Raymond K. Derr, pathologist; and Dr. Wallace J. Lowright, chief of obstetrics department.

The first step toward construction of a $500,000 tuberculosis hospital for Delaware County was taken, April 1. The court has appointed an advisory committee to select a site for the tuberculosis hospital. This board will automatically become the board of directors to manage the institution upon its completion. It is to be strictly a charitable hospital, maintained and operated at the expense of the county. It will mean an assessment of approximately one mill on each dollar of the county's assessed valuation of more than $281,000,000 to run the institution.

There are 1146 physicians in Philadelphia who favor repeal of the Eighteenth Amendment. In a recent wet and dry poll taken among the 3448 local doctors listed in the telephone directory, a total of 2023 replies were returned, of which 450 favored strict enforcement and 427 modification, permitting the sale of light wines and beers. This gives a percentage of 77.8 in favor of either repeal or modification, and 22.2 per cent in favor of enforcement. There would have been a much greater response to the poll among the local physicians if it had been a secret ballot.

A dinner was given at the Bellevue-Stratford Hotel, April 30, in honor of Dr. John Chalmers Da Costa. A charge of $10 per plate was asked for the purpose of establishing a fund to be known as the Da Costa Foundation to be used by the Philadelphia County Medical Society for educational purposes. The speakers were Drs. Da Costa, Walter E. Dandy, associate professor of clinical surgery, Johns Hopkins University School of Medicine; Rudolph Matas, emeritus professor, Tulane University; and John B. Deaver, of Philadelphia.

Excavators of the University of Pennsylvania Museum expedition, who have recently opened a great mastabah or tomb near Meydum, Egypt, are seeking trace of a great magician-surgeon, held in high veneration for his wonderful powers. The Egyptian surgeon whose alleged skill puts all moderns to shame was one of the former residents of Meydum, whom the inhabitants of later times held in profound reverence. This surgeon was the magician Zedi, who flourished in the time of Cheops, about 2850 B. C., and it is stated "He knoweth how to put on again a head that hath been cut off."

A portrait of Dr. E. Q. Thornton, for thirty-eight years an associate professor at Jefferson Medical College, was presented in April as the gift of the senior class to the college. The unveiling of the portrait took place in the clinical amphitheater of the new building. The portrait, presented by Edward Gough, president of the senior class, was accepted by Mr. Van Horn Ely as chairman of the College Committee of the Board of Trustees, and Dr. Ross V. Patterson, dean of the college, on behalf of the faculty. Dr. Hobart A. Hare, a colleague of Dr. Thornton, called him the most universally beloved man in the college.

The Philadelphia County Medical Society held a cancer control meeting on the afternoon and evening of April 23. The program was as follows: Dr. George E. Pfahler, cancer of the mouth; Dr. J. F. Schamberg, cancer of the skin; Dr. Brooke M. Anspach, cancer of the uterus; Dr. J. B. Carnett, cancer of the breast; Dr. Henry K. Pancoast, bone tumors; Dr. Damon Pfeiffer, cancer of the colon and rectum; Dr. Chevalier Jackson, tumors benign and malignant, of larynx and lungs; Dr. James Ewing, New York City, efficiency of modern methods in treatment of malignant diseases; and Dr. Daniel Fisk Jones, Boston, Mass., cancer of the rectum.

The Philadelphia City Council has passed an ordinance authorizing the expenditure of $1,200,000 for the erection of a 400-bed tuberculosis hospital. The new structure will form a part of the group of buildings of the Philadelphia General Hospital. Passage of the ordinance brought to an end a controversy waged for several months between councilman Morris Apt, chairman of the Health Committee, and Dr. A. A. Cairns, Director of Public Health. Dr. Cairns and members of the staff of city hospitals fought throughout the controversy for a 400-bed hospital, and after a bitter battle the ordinance was amended to provide for erection of the 400-bed building.

Dr. Clarence F. Kendall, commissioner of health for the state of Maine, has pointed out that 226 small towns and 65 organized plantations in the state have no resident physician; there is an average of one physician for 916 inhabitants. The majority of the physicians are over 50 years of age. To provide more adequate medical service for the present and the future, many of the physicianless towns are offering bonuses, ranging from $500 to $3500, to young physicians who will settle and take up the rural practice.

Distressing statements of the effect of unemployment on America were made on April 1 by the American Federation of Labor president and two Philadelphia women at a Senate Commerce Committee hearing. "A 'runt generation' is growing up as a result of the situation" was claimed, also that "All along the line families are living on semistarvation diets. Some of the more startling consequences are suicides, insanity, and desertion. It is only the most sturdy who come through with only their economic situation impaired. It is here that your unemployed of today become the unemployable of tomorrow."

The Department of State has extended invitations to foreign governments to send delegates to the thirty-eighth annual meeting of the Association of Military Surgeons, to be held in Washington on October 2 to 4, 1930. These invitations were issued by the American diplomatic representatives abroad. Although the Association of Military Surgeons of the United States is incorporated by an act of Congress, and its advisory board is composed of the Secretary of the Treasury, the Secretary of War, the Secretary of the Navy, the Surgeon General of the Army, and the Surgeon of the Public Health Service, the association has no official connection with the government of the United States.

Because his wife attempted to powwow him by putting drugs and "dried blood" in his coffee, Dr. John E. Barsby, 41, former physician of Chester, was granted a divorce in Media, on March 31. When asked by his attorney if his wife believed in powwowing, Dr. Barsby declared that she did, as did several of her relatives. He said that her actions in that practice continued over a period of months. The purpose of the drug and "dried blood" in his coffee was not made known. The doctor declared that he was not aware that he was being powwowed until he had recurring attacks of illness. His aunt, he said, told him the cause of his illness, and he then confronted his wife, who acknowledged

that she had been feeding him a drug. Because of the drug, he said, he became afflicted with gland trouble.

THE UNITED STATES CIVIL SERVICE COMMISSION announces the following open competitive examinations: medical officer, associate medical officer, assistant medical officer, chief nurse, head nurse, graduate nurse, graduate nurse (visiting duty), graduate nurse (junior grade), social worker—psychiatric ($2000 a year), and junior social worker ($1800 a year), to fill vacancies in hospitals of the Public Health Service, the Indian Service, and in other establishments of the Federal classified service throughout the United States. Applications for these positions must be on file with the Civil Service Commission at Washington, D. C., not later than June 30. The Commission also announces open competitive examinations for dietitians, to fill vacancies as mentioned above. Applications must be on file not later than May 21.

A LETTER POINTING OUT that "Philadelphia is on the verge of losing its water supply through pollution" was sent out on March 26 to hospitals and sanatoria of the State by Florence Keen, chairman of the special committee on stream pollution of the Civic Club. Miss Keen urges that sanatoria and hospitals coöperate in saving the streams of Pennsylvania for citizens. She asks for support of the McCrosson bill to enable local communities to protect themselves from the "intolerable situation" of the water supply. "Physicians are now asking whether the marked increase in recent years of cardiac diseases, gastric ulcers, and cancer may not be due to our present water supply," wrote Miss Keen. "Only the favored few can afford to buy water; institutions cannot. Neither can the multitude. Are they, then, to be condemned to buy water in which fish cannot live?"

IT HAS BEEN ESTIMATED that there are only about 300 Eskimos in the Arctic Coast territory, from the Alaska-Yukon boundary to the Anderson River, a distance of about 360 miles. This is due to the high death rate of Eskimos in this region, says a recent bulletin of the Canadian Department of the Interior. These Eskimos have changed their habits within the past fifteen years, because of the establishment of trading posts across Canada along the Arctic seacoast. In earlier times they were a migratory people, who followed the sea. With the coming of modern commerce, however, the fur of the white fox has been highly prized and the hunting of this animal became the dominant industry. In exchange for these furs, the Eskimos receive rifles, ammunition, power boats, gasoline, imported clothing, and such foodstuffs as bread, jam, tea, and canned goods. The low food value of some of these foods, the unhealthful clothing adopted by the Eskimos, coupled with the contagious diseases which follow civilization, have resulted in this high mortality.

DR. GEORGE H. ROBINSON, bacteriologist at the William H. Singer Memorial Research Laboratory, Pittsburgh, who has studied all of the pneumonia cases in the Allegheny General Hospital for the last four years, is ready to state definitely that there are at least nine additional pneumococcus types, all dangerous strains, commonly found in Pittsburgh, which do not follow the Rockefeller Institute ratios. This observation came about because the scientists at the Singer Research Laboratory have felt for some years that the three "fixed" types occurring in severe cases of pneumonia found and so designated by workers at the Rockefeller Institute did not occur in the same relative ratios in Pittsburgh as in New York. Dr. Robinson's efforts resulted in identification of nine more types, which not only vary from season to season, but, furthermore, every particular type may, in turn, change in virulence from time to time. It was determined, also, at the Singer Research Laboratory, that the average age of death for victims of each of the thirteen strains studied was between forty-four and forty-six years.

THREE SUBSTANTIAL SUBSCRIPTIONS to the building fund of the Woman's Hospital of Philadelphia were announced March 25, following a meeting of the memorial and special gifts committee in the million dollar campaign about to be launched. All are to establish memorials in the new hospital to be erected at Parrish, Preston, and Ogden Streets. The largest was a subscription of $50,000 from Mrs. George H. Earle, Jr., vice president of the hospital's board of managers and honorary chairman of the campaign. C. Henderson Supplee contributed $15,000, and A. Edward Newton made a gift of $10,000. Mrs. Earle's gift is for a department as a memorial to Mrs. Anna L. Fogg and Mrs. George Erety Shoemaker, both of whom were, for many years, on the board of managers with Mrs. Earle. Mr. Supplee's subscription is to establish the x-ray department in the hospital, which will be a memorial as a tribute of his mother, Mary Couse Supplee. Mr. Newton's contribution will provide the medical and children's clinic in memory of his aunt, Matilda Swift.

THE FIVE-TO-NINE YEAR AGE group is the most susceptible to measles, diphtheria, and scarlet fever in Pennsylvania, at least such was the case last year. Reports to the State Bureau of Vital Statistics for 1929 revealed that more persons between the ages of five and nine, inclusive, were afflicted with those diseases than in any other similar group. Two other of the most prominent communicable diseases, whooping cough and infantile paralysis, also showed a high average of cases in the five-to-nine classification, although there were more cases among children less than five years old. There were 48,347 cases of measles reported last year and of that number 26,282 occurred in the five-to-nine group. Of 7423 cases of diphtheria, 2891 were in that group, and 7011 of the 15,288 cases of scarlet fever were also in the same group. In the total of 19,172 whooping cough cases, 7688 were reported from the same class. There were 187 cases of infantile paralysis during the year, with 45 in the five-to-nine group. Typhoid fever was most prevalent among children from ten to fourteen years, 235 of the total of 1262 cases occurring between those years. The diseases were approximately equally divided between the sexes.

THE NATIONAL GUARD AND RESERVES, Third Corps Area, of interest to Pennsylvanians: Lieut. Col. Reuben A. Bogia, Philadelphia, has been relieved from assignment to the Third Coast Artillery District and has been assigned to the First Hospital Center as Medical Inspector; Lieut. Col. Charles E. Remy, Pittsburgh, has been assigned to the 1321st Service Unit. The following Reserve Officers, having accepted reappointment in the Officers' Reserve Corps without the privilege of assignment or active duty, have been relieved from assignments to units indicated after their respective names: Major Karl Reeves, Pittsburgh, 7th Station Hospital; Major John O. Sullivan, Dubois, 8th Surgical Hospital; Major LaBarre J. Leamy, Philadelphia, 62nd Cavalry Division; Major Wallace M. Martin, Philadelphia, 3d Coast Artillery District; and Lieut. Col. Thomas L. McCullough, Pittsburgh, 27th General Hospital.

SECRETARY OF THE NATIONAL SOCIETY OF PENAL INFORMATION, William B. Cox, has just announced the completion of the first comprehensive survey of American prisons and adult reformatories from the point of view of health and medical service. This survey indicates that, in many states, prisons are a part of the political spoils system so that the administrative officers change with the change in state administration. Most of the prison hospitals were found to be greatly understaffed, and inmate help was relied on for the greater part of the hospital work. The equipment in many prison hospitals leaves much to be desired. The values of recreation and entertainment as an aid in mental and physical health of the inmate is being more appreciated. The lack of medical personnel is largely responsible for the neglect in health education of the

inmate. It is recommended that prison hospitals with five hundred inmates should have a full-time physician. All constructive surgery and other rehabilitation work should be done while the inmate is available, so that he may return to society with as few physical handicaps as possible.

Warning against stimulation of the blood circulation, either by exercise or by alcoholic stimulants, has been issued by M. Graham Bettling, of Carnegie Museum, Pittsburgh, an authority on snakes, with the coming of the season when Pennsylvanians take to the woods and the possibility of being bitten by snakes increases. Stimulating the circulation of the blood by running, becoming overheated, or by taking alcoholic liquors, Mr. Bettling said, only distributes the snake poison through the body more rapidly. "The poisonous snakes of Pennsylvania," he said, "are the copperhead, the most common; the massasauga, or pygmy rattler; and the banded rattlesnake. The massasauga has been found only in Allegheny, Butler, Mercer, and Crawford counties, while the banded rattlesnake is common to most of the mountains of the State, and is apparently multiplying rapidly. In regions where snakes are plentiful, do not put the fingers under a rock or log when turning it over, but use a stick for this purpose. In western Pennsylvania, both the massasauga and copperhead will strike as the log or rock is removed. In going through the woods, step on top of a log and then down. Near Pittsburgh, a girl was bitten by a copperhead, because as she stepped over a log her foot came down beside the snake.

The Medical report for 1929 of the Mutual Benefit Life Insurance Company shows that as to the causes of death, the same trends noted in recent years still prevail. Typhoid fever and tuberculosis show an ever-decreasing rate. Deaths from cardiovascular and renal disease remain high, although not in excess of last year, but there has been an increase in deaths from cancer, diabetes, pneumonia, and disease of the digestive tract. Nearly one-half of all deaths (45 per cent) is due to disease of the heart, blood vessels, and kidneys, and of these deaths more than one-third occurred among their policyholders who were under sixty-one years of age. Deaths from accident continue to increase, in large measure, caused by the ever-increasing number of deaths from automobile accident. Of 251 deaths from accident, 117 were due to automobile casualties. When one realizes that nearly nine per cent of the $14,134,145 which was paid by this company alone in death claims during 1929 was due to automobile accidents, one can form some appreciation of the economic loss that the country is experiencing from this source. With the ever-increasing number of automobiles, now numbering over twenty-six and a half million, there will inevitably be a large number of deaths from this source, but it is tragically apparent that our precautionary measures are still far below what they should be. Suicide accounted for 128 deaths. The loss entailed was $1,223,959.56, the largest number of deaths and the largest amount of loss in the history of the company. During periods of financial difficulties, deaths from suicide invariably increase.

The Philadelphia Heart Association will undertake a three-year program to bring the heart clinics of Philadelphia up to the requirements set by the American Heart Association, it was decided April 16, at the annual meeting of the local association. At the present time, only six of the twenty-five cardiac clinics in the city have standards above the minimum set by the American Association. During the remainder of this year clinics requiring such service will receive experienced assistance in conducting their work and in the proper preparation of their records. A trained worker has been engaged for this work, which will be completed within twelve months.

In 1931 the plans call for statistical studies and tabulations of the work done by all heart clinics of the association, and the establishment of a uniform system of bookkeeping and reporting of cases, in order that information about Philadelphia may be readily assembled. During 1932 a systematic effort will be made to introduce the standard records of the American Heart Association into the clinics.

The following officers were elected: Dr. James E. Tally, professor of cardiology at the Graduate School of Medicine of the University of Pennsylvania, president; Dr. Edward B. Krumbhaar, vice president; Dr. William D. Stroud, secretary; Mr. Morris W. Stroud, treasurer. Those elected to the board of governors are Drs. S. Calvin Smith, William D. Stroud, Joseph B. Wolffe, Messrs. William Anderson and Lambert Cadwalader.

At a recent meeting of the board of trustees of the North American Children's Sanitarium for the treatment of Surgical Tuberculosis it was decided to turn over to the University of Pennsylvania the property of the sanitarium at Ventnor, N. J. This property will be sold eventually by the University of Pennsylvania and $100,000 of the sum realized through its sale will be used towards defraying the construction costs of the children's ward of the University's Graduate Hospital. The remaining funds accruing from the sale will be used as an endowment fund to be called "The North American Children's Ward Endowment Fund," and the income will be devoted exclusively to the treatment and care of sick or injured children in The North American Children's Ward. The North American Children's Sanitarium was established in 1910, chiefly through the interest and initiative of E. A. Van Valkenburg, editor and publisher of *The North American* until his retirement in 1924. This sanitarium was the first thoroughly equipped institution devoted exclusively to the treatment of poor children afflicted with tuberculosis of bones and joints. In formally accepting the gift, Provost Josiah H. Penniman, said: "The action of the trustees of The North American Children's Sanitarium in conveying their property at Ventnor to the University has accomplished two noteworthy purposes: first, it has nobly perpetuated through a continuing service to sick children the memory of an institution which, for many years, performed a notable service in this field; and second, it has increased the opportunity of the Graduated Hospital for service to the community along the line which will doubtless prove of the greatest benefit."

The Philadelphia County Medical Society was very active in bringing before the profession and the public matters of vital interest in celebrating health week. The following were conducted in the county medical society building:

On March 24, Dr. Morris Fishbein, editor of the *Journal of the American Medical Association*, delivered a very interesting address on "Prolongation of Life." Dr. Fishbein interspersed his discourse with some of his witticisms. This lecture was open to the public.

On March 25, Dr. Francis Ashley Faught, delivered a lecture for the public on "Yearly Health Examinations."

These two lectures of direct interest to the public led up to Public Health Day, March 26, which was celebrated by more than 3000 local physicians, 250,000 public school children, 75,000 parochial pupils, and by 80,000 club women.

"The Prevention and Cure of the Common Cold" was the subject of Public Health Day this year. At the stated meeting of the county medical society, held March 26, the following program was held. Dr. Peter K. Olitsky, Rockefeller Institute, New York City, "The Bacteriologic Aspect of the Common Cold"; Dr. Dean F. Smiley, medical adviser of the Department of Hygiene and Preventive Medicine, Cornell University, Ithaca, N. Y., discussed the subject from the standpoint of a large university in relation to the inroads of the common colds, and the results had from efforts of control; Dr. Edward L. Bauer, Department of Health, Philadelphia, presented the subject from the standpoint

of the Department of Health; Mr. Harold S. Keller, Medical Department, Bell Telephone Co., Philadelphia, furnished information of the effects of this insidious enemy upon a large industrial corporation; and Dr. John A. Kolmer, professor of pathology and bacteriology, Graduate School of Medicine, University of Pennsylvania, summarized and closed the discussion.

In observance of the day, health playlets were presented in virtually all the city schools under the direction of the Inter-State Dairy Council. Leaflets on the cold infection were distributed among school children, while lessons in hygiene were devoted to this topic. A special film entitled "Confessions of a Cold" was shown in the schools by the educational director of the Philadelphia Health Council. The message of Public Health Day was not confined to one day, but was presented throughout the week. Daily radio talks were given. Addresses were delivered at the various women's clubs. The Philadelphia Health Council and Tuberculosis Committee held a special exhibit, at which illustrated lectures were given.

INTERNATIONAL BIRTHDAY FOR DR. WELCH.—On April 8, the dean of American medicine, Dr. William Henry Welch, of the Johns Hopkins University, was given an international birthday party. The program was broadcast from Washington and President Hoover was the honorary president for the celebration. Simultaneously, celebrations were held in London, Paris, Berlin, Leipzig, Tokio, Pekin, Baltimore, Cincinnati, New York, and New Haven, where friends, former students, and colleagues met to honor Dr. Welch on his eightieth birthday. Dr. Simon Flexner, director of the Rockefeller Institute for Medical Research, and a former student of Dr. Welch's, was the chairman of the committee in charge of the celebration. This committee said: "America owes more to Dr. Welch than can ever be told in any tributes. Half a century ago he began his leadership in modernizing American medicine. Through the reforms which he has instituted in medical study, through his researches, the many hundred of doctors trained by him, and the vital public health measures which he has inspired, it is literally true that millions have benefited from his contributions." The ceremonies in Memorial Continental Hall, Washington, began at noon and lasted until one p. m. President Livingston Farrand, of Cornell University, presided and delivered an address. At the close of an address by Dr. Flexner, the ceremony of presenting drypoint portraits of Dr. Welch, by radio, to the various institutions which also received the actual portraits in simultaneous ceremonies, was conducted. The first impression from the drypoint plate was presented to Dr. Welch. President Hoover delivered an address which was followed by a response from Dr. Welch.

Dr. Welch, graduate of Yale Medical College and the College of Physicians and Surgeons, in New York City, began his pioneering work in 1877 as a teacher in Bellevue Hospital Medical College, in New York, where he introduced the laboratory methods which launched a new era in medical education.

In 1884, Dr. Welch was called to the Johns Hopkins University to become professor of pathology. He was the first dean of the Johns Hopkins Medical School. He was also the first director of the Johns Hopkins School of Hygiene and Public Health, dedicated in 1926, one of the first of its kind in the world. At present he is professor of the history of medicine at the Johns Hopkins University. The new medical library, dedicated last October, bears his name.

TODAY PENNSYLVANIA ranks first in state-owned sanatoria for the treatment of tuberculosis. With the institutions located at Mont Alto, Cresson, and Hamburg, having a total capacity of 2080 patients, this position has been maintained for years. To this group has been added the first, second, and third units of the State Hospital for Crippled Children at Elizabethtown, which in its particular field represents a new departure in the hospital chain for the treatment and rehabilitation of children crippled by tuberculosis or other diseases, or born with the handicap of deformity.

On March 20, twenty children were transferred in trucks supplied by Adjutant General's Department and accompanied by a squad of state highway patrolmen to the hospital at Elizabethtown, representing the first group of patients at the new institution. Dr. Theodore B. Appel, State Secretary of Health, and other members of the Department formed the reception committee at the hospital, and the children's admission to the institution marked the informal opening of the recently completed initial three units of the hospital.

The Elizabethtown site was selected because of its strategic location, availability of water and electric power and sewage disposal, and presence of much timber land, and several buildings which, with a comparatively small outlay, have been adapted to the hospital's purposes. One of these buildings is a large modern dairy barn, having a capacity of sixty cows and will assure the institution pure milk in quantities required for the patients. The present group of buildings has a capacity of one hundred patients. Since it is a hospital for children, an added atmosphere of intimacy and quaintness has been developed. Color is employed wherever possible and has been used to artistic advantage.

Dr. Appel has made the following statement: "This institution is for the cure, vocational training, and treatment of crippled children, which means reconstruction and rehabilitation; it is a hospital and not a home. Children from one month to sixteen years who are handicapped by acquired or congenital deformities, will be admitted and cared for. During their stay, as far as possible, their mental and vocational education will be directed, and all means taken to lessen their handicaps in every way.

The purpose of this institution is to make these unfortunates better able to care for themselves and become useful citizens. Consequently no chronic cases nor case that cannot be improved will be admitted. For the same reason, the mentally unfit, in whom perhaps the physical deformity is the least factor, will automatically be disqualified.

"Applications for admission will be made through the respective county medical directors and applicants will be received as rapidly as possible with due regard to county quota, to the type and character of the deformity and the probability of rehabilitation.

"The institution will endeavor to render the greatest amount of good to the greatest number."

The following professional consultants have been appointed by Dr. Theodore B. Appel, with the approval of Governor Fisher, for service at the State Hospital for Crippled Children: *physicians,* Drs. John B. McAllister, Harrisburg; Frank G. Hartman, Lancaster; *surgeons,* Drs. Harvey F. Smith and George B. Kunkel, Harrisburg; John L. Atlee and S. G. Pontius, Lancaster; *ophthalmologists,* Drs. Russel J. Zimmerman, Harrisburg; Harry C. Fulton, Lancaster; *pediatrists,* Drs. G. Kearney Smith, Lancaster; Arthur L. Page, Harrisburg; *laryngologists,* Drs. W. Hess Lefever, Lancaster; George H. Seaks, Harrisburg; *pathologist,* Dr. Louise E. Keasby Procter, Lancaster. In addition, it is understood that four dentists will be appointed in the near future.

BOOK REVIEWS

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

SURGICAL DIAGNOSIS. By 42 American Authors. Edited by Evarts A. Graham, M.D., professor of surgery, Washington University Medical School. Three Octavo volumes, totalling 2750 pages, containing 1250 illustrations, and separate index volume.

(Continued on page xviii.)

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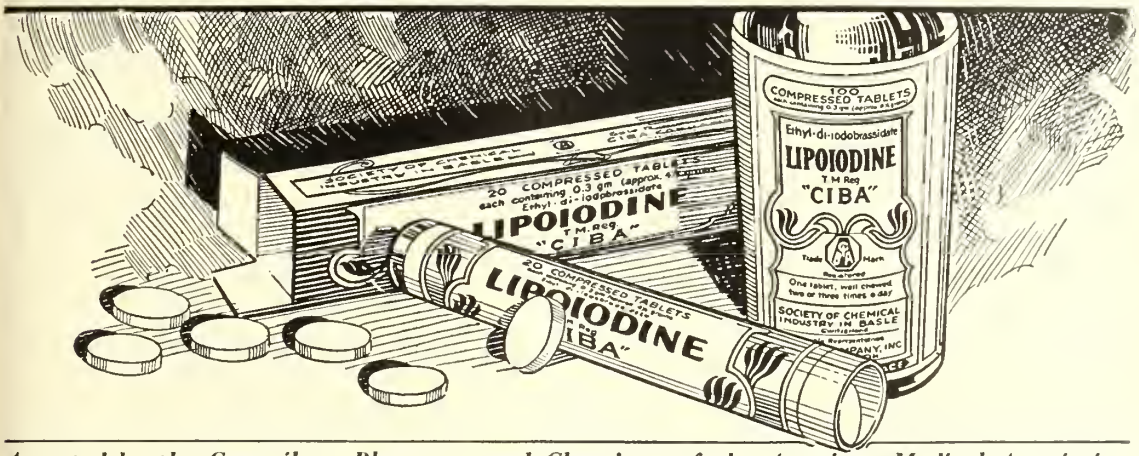

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BOOK REVIEWS

(Continued from page 588.)

Philadelphia and London: W. B. Saunders Company, 1930. Cloth, $35 a set. Volumes I and II are now ready. Volume III and separate index volume, ready March 15, 1930.

It is needless to emphasize the importance of accurate diagnoses in any disease or abnormality amenable to surgical therapy. The relative importance of such accuracy is increased by the great proportion of conditions which are termed surgical and the rather high percentage of those in the medical profession who practice general surgery. Graham's *Surgical Diagnosis* will undoubtedly be in great demand as an authoritative and up-to-date reference for the medical student, practitioner, or surgeon and has long been needed. One gets surprisingly little help from any of the standard textbooks on surgery when a puzzling case presents itself. Many, although revised, are antiquated in style, show old illustrations and emphasize terminal pathology. Graham's book is entirely new. Surgical lesions involving the different systems and regions are considered solely from the staudpoint of diagnosis. In order, however, to bring about a clear understanding of symptomatology, objective findings, and the course of the disease, considerations of etiologic factors, underlying pathology, and disturbed physiology or chemistry are presented. Treatment is, of course, not considered.

For each section, Dr. Graham has been fortunate in securing contributors who are recognized as authorities on the subjects they present. In Volume II, Curtis writes on gynecologic diagnosis; Blair, on the diseases of the face, mouth, and jaw; Yates, on the neck; Horsley, on the stomach; Hertzler, on the peritoneum, etc. Some of the less well-known contributors are Graham's associates in the department of surgery of Washington University.

One can find little to criticize in this volume. There is some duplication of subject matter in that lesions considered under a certain system are also taken up in the sections which consider lesions in particular areas or regions. This is perhaps advantageous for the reference reader. There seems, also, to be an unnecessary duplication of illustrations. The merits of this volume of Dr. Graham's work, however, are great and it is recommended as a guide to all who come in contact with surgical patients.

SURGICAL CLINICS OF NORTH AMERICA. (Mayo Clinic Number—Feb., 1930) Volume 10, No. 1, contains 174 pages with 82 illustrations. Paper, $12.00 per clinic year; cloth, $16.00 per clinic year. (Issued serially, one number every other mouth.) Philadelphia and London: W. B. Saunders Company.

The February number of Surgical Clinics of North America is the Mayo Clinic Number and contains a comprehensive review of the work being done at the Mayo Clinic. The authors are numerous and many subjects are taken up. Of special interest are the articles on plastic surgery, particularly of the face. The volume is beautifully illustrated.

TREATMENT IN GENERAL PRACTICE. By Harry Beckman, M.D., Professor of Pharmacology at Marquette University, Milwaukee, Wis. Octavo volume of 899 pages. Philadelphia and London; W. B. Saunders Company, 1930. Price, $10 net.

This is a readable book, which will afford profit and pleasure to any one in its perusal. It is possible that the history of development of our knowledge about some diseases has been given at too much length, which makes the book a rather bulky one for quick reference, but this does not detract from its value.

The author betrays a wide knowledge of therapeutics, and his recommendations have a good foundation. The book is unusually free from typographical errors, such as are usually noted in first editions.

(Concluded on page xx.)

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BOOK REVIEWS

(Concluded from page xviii.)

We recommend this book as a safe guide to treatment of diseases, especially to the younger medical generation, to round out their practical knowledge which suffers so much in these days of scant teaching of applied therapeutics by all medical institutions.

Danger to Health After Forty Increasing

Is the rapid pace of modern existence counteracting the good work being done by health authorities toward the control of disease and the lengthening of human life? Instead of being stretched to greater length, it now appears, according to the *Illinois Health Messenger*, that the life span of adults is being cut short. Mortality rates in Illinois among persons past forty have increased about ten per cent in ten years. The *Messenger* says:

"At the same time, the average life span in general, or the life expectancy at birth, has increased about a full year. A baby born in 1920 could look forward, on the average, to fifty-eight years of life. One born today may look forward to fifty-nine years of life. The gain has resulted entirely from saving child life. Infant mortality has decreased very noticeably during the last decade. In Illinois, for example, 106 infants out of every 1000 born alive in 1918 died before reaching one year of age, but only 64 out of each 1000 died in 1928. This improvement made the average life span increase, although mortality after forty was increasing. The reasons for the higher mortality among the middle-aged are many and complex. One important cause is the neglect of ordinary precautions that people in that age group ought always to observe. When men begin to enlarge their girth and women have to resort heavily to cosmetics, the time is ripe for medical advice about living habits. Age forty, or thereabout, is the turning point of life, when heart disease, cancer, nephritis, and diabetes begin to grow prominent. All of these ailments may be hastened by errors in personal hygiene and errors in diet. All of them are subject to indefinite postponement, if not actual prevention, by the discovery and removal of conditions favorable to their development."

It is pointed out by the *Messenger* that concentrating thought and action on infant and child health has reduced mortality among the very young sufficiently during the last decade to cause a general increase of one year in the life expectancy at birth. Similar results, it is contended, would follow a concentrated health drive among people past forty. An annual health inventory and the planning of one's habits are recommended.

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CARCINOMA OF THE STOMACH*

DEAN LEWIS, M.D.
BALTIMORE, MD.

The accepted treatment of carcinoma of the stomach is resection. The resection should be wide enough to extend well beyond the visible evidences of disease. In order to permit of such a resection the diagnosis must be made before the tumor is so large or has extended to adjacent viscera and the peritoneum, that the procedure is impossible. The number of cases of carcinoma of the stomach in which resection is possible is small. In only twenty per cent of the cases of carcinoma of the stomach appearing at the Johns Hopkins Hospital can a resection be performed. In many instances the patient has not been sick enough to compel him to seek medical advice, and when such is sought the growth has already extended well beyond the bounds of operability. The question naturally arises whether there are not premonitory symptoms which have been overlooked.

Unfortunately in many textbooks the late clinical picture of the disease is given. Recently there was published in a standard treatise on medicine an article upon carcinoma of the stomach in which the following clinical picture is given. A man, of fifty-five years, had been in fairly good health up to about six months ago. Recently gradual loss of appetite has been noted and a slight feeling of distress, which has grown more severe. The patient complains of a feeling of pressure and fullness in the region of the stomach, frequently associated with belching, and, notwithstanding that his diet has been carefully regulated, the distress has continued to increase. There has been gradual loss of strength and energy, a distaste for work and general depression. The bowels have been constipated. During the past two months all the symptoms have become aggravated. At the present time, loss of appetite is marked and the patient has become more and more emaciated. There have been occasional attacks of vomiting, the vomitus consisting partly of undigested acid masses of food and partly of coffee-groundlike material. When the patient was examined he was found to be much emaciated; his complexion, sallow and cachectic; the skin, flaccid; and the muscles were thin and atrophic. The epigastrium or mesogastrium is found to be distended. The outlines of the stomach can easily be made out. The lower border of the stomach is two fingerbreadths below the umbilicus. From time to time peristaltic waves pass over the stomach from left to right and a succussion sound may be elicited over the dilated stomach. While the whole region of the stomach is somewhat sensitive to pressure, it is impossible to discover any strictly circumscribed, painful pressure point. To the right, however, underneath the costal margin in the region of the pylorus is a hard, nodular tumor, which is somewhat sensitive to pressure. When the stomach contents are aspirated a large quantity of acid material is removed, in which are found partially digested particles of food. No free hydrochloric acid is found. Lactic acid is present. A test meal is given, and at the expiration of six hours abundant residue is found, containing particles of meat.

It has been said of Briggs of Burnley that he recognized the face of disease, one of the greatest attributes of a diagnostician. In the clinical picture just given the face of disease should be easily recognized. It is the senile face of carcinoma of the stomach, a face always with us, and not destined to sojourn even for a short while in other parts. It should be recognized at a glance.

In analyzing why patients come to the doctor after the disease has become so advanced, certain things stand out prominently. In the first place, people become accustomed to some distress, and the recent distress which they have experienced is probably quite like that which they have had before, and from which they may have recovered by modification of their diet or the taking of some medicine (patent or otherwise). They, therefore, pay little or no attention to the early warning signs of dyspepsia and do not consult a doctor until loss of weight and weakness become so marked that professional advice and care become imperative. In the second place,

* Read before the General Meeting of the Medical Society of the State of Pennsylvania, Erie Session, October 2, 1929.

the clinical picture of carcinoma of the stomach, which has been given so often, is the late picture and we occasionally, yes, more than occasionally, forget that early carcinoma of the stomach may not be associated with emaciation, cachexia, or much weakness.

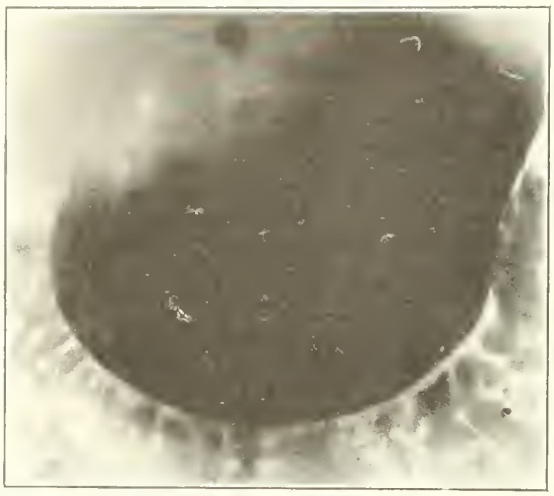

Fig. 1. X-ray of stomach of patient with early pyloric block caused by small carcinoma. Symptoms of pyloric occlusion of three weeks' duration. Hydrochloric acid absent. This absence cannot be explained on the grounds ordinarily given for disappearance of the acid. The early disappearance of the acid suggests the possibility that it might have been absent before the carcinoma developed.

To emphasize these points, the following history, taken from the treatise on medicine referred to, is cited. A doctor, forty-two years of age, gave the following history. He had had dyspepsia for about six months and complained of a feeling of pressure and fullness in the stomach after eating, of loss of appetite, and frequent belching. Vomiting had not occurred. He was well nourished, the adipose tissue was abundant, and no cachexia was noted. The tongue was slightly coated, the region of the stomach did not protrude and was but slightly sensitive to pressure. No definite point of tenderness could be found and no abnormal resistance was encountered. The stomach apparently was not enlarged. Examination of stomach contents revealed a relatively abundant residue containing coarse morsels of meat and bread given in a test meal. Free hydrochloric acid could not be found. Lactic acid was present. This patient was well nourished and gave no evidence of malignant disease, such as is so frequently elicited. The absence of hydrochloric acid, however, should have aroused suspicion. This patient was not examined again for several weeks. When seen the second time the nutrition was better and the general strength greater. The patient was hopeful and looked forward to an early recovery. Examination of the stomach contents gave the same results as before.

Five months later a small nodule was discovered in the epigastrium. From this time on the tumor increased rapidly in size. The patient began to lose strength and to emaciate. An operation was then performed. A resection could not be performed because of adhesions and metastatic growths. This case is cited to indicate that an appearance of good health is not incompatible with a malignant tumor of the stomach and that wide dissemination of such a tumor may occur before emaciation, anemia, weakness, and cachexia become marked in the early history. Dyspepsia had been noted six months before. There was a feeling of pressure and fullness of the stomach after eating, loss of appetite, and frequent belching. The absence of free hydrochloric acid at the time should have aroused enough suspicion that the patient would not have escaped from close supervision for five months. This occurred before x-ray examinations of the gastro-intestinal tract were made with the frequency that they are now. If such an examination had been made, undoubtedly a filling defect, which would have made possible the diagnosis of a malignant tumor.

Fig. 2. Defect in stomach in a patient 38 years of age. This patient felt fairly well up to the time he consulted a doctor some three weeks before this picture was taken. When an exploratory operation was performed extensive metastases were found in the liver. The disease in this case had a very insidious onset, and the patient did not consult a doctor before extensive metastases had developed.

How can the diagnosis of carcinoma of the stomach be made earlier is the question which naturally arises. The disease is frequently insidious in onset, and has passed beyond the stage of operability before the physician is consulted. Is it possible to recognize mild symptoms which

would render the clinician suspicious of carcinoma, or would the patient recognize these early enough to make him think it wise to consult a doctor before wide extension of the disease had occurred?

During the past few years much has been written about the precancerous stage. The significance of ulcer as the precancerous stage of gastric carcinoma has been emphasized from time to time. Wilson and McCarthy give figures which indicate that as many as 71 per cent of carcinomas of the stomach develop upon an ulcer base. The figures given by others differ considerably from those of Wilson and McCarthy. Payr states that 26 per cent, Küstner 3 per cent, Orator 10 to 15 per cent, Petersen and Colmers 0, Saltzmann 0, and Boerman 0, of gastric carcinoma develop upon an ulcer base. Clinically, I have been struck with the infrequency with which a preceding ulcer history can be elicited in carcinoma of the stomach. Hirschfeld has come to the conclusion, as the result of clinical experience, that there is no connection between ulcer and carcinoma of the stomach, and the diversity between the figures of different pathologists would indicate that nothing definite about such a relationship can be said. This diversity of opinion undoubtedly depends upon the variable standards that are accepted, which might justify one in concluding that a carcinoma has developed on an ulcer base. Definite malignant changes in the border of an ulcer with a free floor would justify one in concluding that the carcinoma developed in an ulcer. Clinical histories, however, reveal a previous history of ulcer in but few cases of carcinoma.

Absence of hydrochloric acid may be noted in other lesions, but it is one of the most valuable early signs of carcinoma, and one to which enough significance is not attached. Bird, as early as 1842, studied the hydrochloric and organic acids in a case of dilatation of the stomach caused by carcinoma of the pylorus. He examined the stomach contents in a number of cases and came to the conclusion that free hydrochloric acid may be present in what he regarded as the irritative stage of the disease. He thought that it decreased with loss of strength. The organic acids, however, seemed to increase as the free hydrochloric acid decreased.

Hydrochloric acid may be absent in other conditions, such as pernicious anemia, carcinoma of the colon, and after fevers; but its absence in the presence of digestive disturbances should arouse suspicion and a most careful examination should be made.

No adequate explanation of the absence of hydrochloric acid in carcinoma of the stomach has been given. It may disappear early, and it has been suggested that its disappearance may predispose later to the development of carcinoma.

It has been suggested that the secretion of the ulcer will neutralize the acid and that the acid secretion may be reduced as the result of anemia. Explanations which have been given are unsatisfactory. The relation of different types of gastritis, which may be associated with ulcer and carcinoma and their relation to the presence and absence of hydrochloric acid, will be discussed later.

Lee has recently reviewed the histamin test; one of the newer methods for the study of gastric function. In this review he states that the routine methods for the study of gastric function still leave much to be desired. The ordinary test meal has several characteristics which lessen its value as an indicator of gastric function. It has been criticized because it does not put sufficient work on the stomach; it cannot be repeated identically; it is influenced too much by such accessory factors as appetite, quantity of saliva, speed of eating, and degree of mastication; it does not always give enough data to reach a conclusion; it does not lend itself well to cytologic or bacteriologic studies; it does not give the same results on repeated trials.

The histamin test is a natural development of the work not only of Dale and Richards, who in 1918 pointed out the vasodilating properties of this substance, but also of Popielski, who in 1920 found that histamin was a remarkable stimulant of the gastric juice.

The histamin test is easily performed. It has not been completely standardized. Food is withheld for three or four hours, or over night, before the test is made. The patient is allowed only a small amount of water during this period. The stomach tube is passed and the contents of the fasting stomach removed. The blood pressure and pulse rate are noted and then the histamin is injected subcutaneously. The preparation commonly used is that of Burroughs, Wellcome and Company. These are small tablets of ergamin acid phosphate, each tablet being equivalent to one milligram of histamin. Many inject arbitrarily one milligram, while others (Polland, Roberts, and Bloomfield) give 0.1 milligram for every 10 kilograms of body weight. Experimentally, Rothlin and Gundlach, using a Pawlow punch, found 0.0033 mg. per kilogram effective. After the drug has been given the stomach is aspirated 15, 30, 60, and 90 minutes later. Each time the blood pressure is taken and the pulse counted. The fractional specimens are then examined in the regular manner.

Clinically the histamin test has been of great value. One of its first applications was in a group of achlorhydrias, and it was soon found that the majority of patients who failed to show any hydrochloric acid with the test breakfast did give an abundant acid secretion with the histamin test.

Fig. 3. Extensive defect of stomach produced by carcinoma. This tumor had a surface growth and could be resected after a gastro-enterostomy had been performed. The patient gained in weight following the gastro-enterostomy and the tumor became much reduced in size. A surgeon was not consulted until the tumor had reached considerable size.

The gastric secretion in carcinoma of the stomach, according to Cade and Milhaud, is slow, feeble, and irregular, with little or no acid. Sometimes the test may be of value in distinguishing between a small cancer at the pylorus and a duodenal ulcer, if the x-ray findings are not decisive. An Ewald or even an alcohol test meal may not stimulate acid secretion in cases in which an abundant acid secretion may be produced by histamin. The test may be very helpful in differentiating between ulcer and carcinoma of the stomach. The absence of hydrochloric acid occurs so frequently in carcinoma, even in the very early cases, that it is an important sign. It should not be overlooked. It may be the sign directing to an early and correct diagnosis.

At one time the diagnostic significance of lactic acid was emphasized, especially by Boas. It is only necessary to inquire into the conditions which are needed, if lactic acid is to be produced. Before this is possible the secretion of gastric juice must be reduced, there must be stagnation of stomach contents and deficient absorption; the last an accompaniment of the first two. In the passage of starchy material through the mouth, more or less lactic acid is usually formed. Normally this lactic acid, like other soluble products of digestion, is rapidly absorbed. When absorption is rendered difficult by stagnation of stomach contents and there is secretory insufficiency, the most favorable conditions are provided for the continuation of lactic fermentation, and the Boas-Oppler bacillus will be found in the stomach contents.

It has already been stated that the clinical course of carcinoma of the stomach is insidious in onset and the disease frequently pursues a clinical course so stealthily that the patient has no warning of its gravity or extent. The question naturally arises whether there may not be some lesion of the stomach which would give warning signs, whether there may not be a precancerous lesion (a word poorly chosen) which is comparable to similar lesions existing in other parts of the body.

Different types of gastritis have been described as occurring with carcinomas of the stomach. Some of these have been supposed to antedate the development of the carcinoma; while again it has been stated that the gastritis was secondary to the carcinoma. Konjetzny has examined pieces of the stomach removed by resection for carcinoma. In eighty-three such specimens he found definite evidences of gastritis in ninety per cent. A polypous gastritis, with definite polyps upon which carcinoma developed, has been described. If this gastritis, which is usually rather diffuse, is a precancerous stage, it is strange that the carcinoma develops in one area and that multiple primary carcinomas of the stomach are not more common. The gastritis is less marked as one passes from the tumor, which suggests that this inflammatory process began near the carcinoma and then extended to other parts of the gastric mucosa. Clinically it cannot be determined whether this chronic polypous gastritis can persist for a long time without symptoms and a carcinoma develop upon it suddenly without giving rise to any definite indications.

Orator describes two different forms of gastritis. One, associated with carcinoma, causes atrophy of the mucosa and involves most of it, and another which occurs chiefly in the pylorus and found in ulcer. Although the latter type of gastritis occurs chiefly in the pyloric portion of the stomach, localized changes may be found in the fundus or even mild general changes may be noted. Orator even goes so far as to say that the gastritis may represent the precancerous

lesion, and that early resection of such an area may represent an early operation for carcinoma.

Such different types of gastritis may not be found in the mucosa of resected specimens. If even this gastritis were present in a high percentage of cases and could be regarded as a precancerous stage, a precursor of carcinoma for-

Fig. 4. X-ray of carcinoma of stomach showing marked filling defect. This patient had a marked anemia, and the diagnosis could be made upon the general appearance of the patient. This operation was performed late. A resection could be done, but there was considerable glandular involvement on both curvatures near the pylorus. Diagnosis and operation both late; onset insidious. Operation delayed because seriousness of lesion was not recognized.

mation, we have no way of recognizing it at present, for it does not produce symptoms which we are able to interpret. Age can no longer be regarded as a factor in diagnosis. This does not mean that carcinoma does not develop most frequently in what we are still pleased to call the cancer age. Carcinoma of the stomach may occur in the young.

There is in the hospital now a girl nineteen years of age who was operated upon a little over a year ago for an extensive carcinoma of the stomach, with massive ulceration. She had been sick for about six months with pain suggestive of a chronic indurated ulcer. The absence of free hydrochloric acid suggested a carcinoma. The filling defect was marked upon x-ray examination. The stomach was resected in this case and an extensive ulcerating carcinoma found. This girl has within a few months following resection an extensive recurrence of the growth. This carcinoma developed in a girl well below the age of cancer.

The statement still remains true that the carcinoma which causes pyloric obstruction early is the one in which the diagnosis is made early. Recently, the writer operated upon the earliest carcinoma of the stomach, basing age upon size, that he has encountered. This patient, a man of sixty-five, for one month previous to entering the hospital had complained of a heavy feeling in the stomach, which for the most part was noted immediately after eating. During this period he had noticed an increasing tendency to belch. The patient had been nauseated on two occasions and obtained relief by vomiting. No blood had been vomited and no blood had appeared in the stools. Examination of the blood showed: hemoglobin, 72 per cent; leukocytes, 3,490,000. Peristaltic waves could be seen passing over the stomach. The free acid was 0, and the total acidity, 35.

This patient had a definite pyloric block and an absence of hydrochloric acid. A resection of the pyloric region was performed and a small carcinoma, the size of the end of one's thumb, was found, situated at the opening, thus causing early pyloric stenosis. The mechanical obstruction directed attention to the lesion of the pylorus, and an early operation was the result.

An insidious onset of the disease, in which a diagnosis is postponed until extensive metastases have formed, is noted frequently, and it should be our aim to make an early diagnosis in such cases. It is a question whether this can be done, because of the mode of onset and clinical course of the cases under discussion. This patient is thirty-eight years of age. His father died of cancer at sixty-nine.

The general health of the patient has been excellent. He had the usual diseases of childhood. Some years ago the patient had indigestion, but there has been no history of any trouble in recent years. This patient began to feel a little below par a short while ago, but he was able to continue work and played golf frequently. A physician was first consulted on August 1, one month before he entered the hospital. At this time a lesion of the stomach was suspected. No free hydrochloric acid was found when the stomach contents were examined. A month and a half ago he noticed a sense of fullness after eating and eructations of gas occurred. Since then these symptoms have become worse and the discomfort has become pain. The pain is felt most frequently in the epigastrium, but it is not constant in position. He has felt some pain in the back at the level of the stomach. Pain is also experienced when the patient takes a deep breath, yawns, or laughs loudly. Recently, pain is felt in the back when the patient straightens

up. He sometimes walks bent over. There has been no jaundice, tarry stools, or hematemesis; the hemoglobin is 85 per cent; no free hydrochloric acid was found in the stomach contents; the combined acidity was 8. Fluoroscopic examination revealed a hypermotile stomach. The probable diagnosis was ulcer of the stomach.

The patient experienced considerable pain below the right costal margin. Localized tenderness was sufficiently marked to suggest a slow perforation of an ulcer. When an operation was performed, extensive metastases were found in the liver, and the pain, of which the patient complained, and the localized tenderness were caused by a metastatic node in the margin of the liver. Case after case illustrating the insidious onset of the disease could be cited. This patient was not feeling badly enough to consult a physician; but when he did, extensive metastases had already formed in the liver and peritoneum.

Bright once said: "By the eye you will learn much, for many diseases have a most distinctive physiognomy, such as the sunk and shriveled features derived from the long-continued disease of the abdominal viscera, the white and bloated countenance attendant on the changes in function or structure of the kidneys, the sallow and puffy cheeks of the liver diseased from habitual intemperance, the squalid and mottled appearance of cachexia dependent upon the united effects of mercury and syphilis, the pallid face of hemorrhage, the waxen hue of amenorrhea, the dingy whiteness of malignant disease, the lassitude of fever, the purple cheek of pneumonia, the bright flush of phthisis, and the contracted features and corrugated brow of tetanus."

Many of these are the faces of disease at what may be called the senile period. The whiteness of malignant disease occurs in the late period, and the disease must be recognized much earlier. How this is to be done is a question which we must all consider. Certainly every patient who has indigestion is not a cancer suspect, and it is a doubtful policy to suggest to the people the necessity of too many examinations. Cancerphobia is almost as bad as cancer itself.

The profession can be more careful, however, in the examination of patients in whom indigestion persists a long time or recurs frequently. The diagnosis will be made relatively early in those cases in which pyloric obstruction occurs early. The diagnosis will probably be delayed in those cases without obstruction. In all cases the stomach contents should be examined and the absence of hydrochloric acid regarded with deep suspicion. Histamin may be used to advantage in making such an examination. An x-ray examination should be made to determine the presence or absence of a stomach defect. We must continually be on our guard in these cases so that we will not become negligent in the examination of patients.

The description of malignant disease of the stomach should be rewritten, the symptoms occurring late being relegated to the pigeonhole of useless information. Pigskin, ulcerating tumor, and enlarged lymph nodes still appear too frequently in surgical literature as symptoms of carcinoma of the breast. May the diagnosis soon be made so early that these findings will no longer be discussed! The sooner the old clinical descriptions of carcinoma of the stomach disappear the better.

Even when this happens there will be a certain number of carcinomas of the stomach which have passed beyond the operable stage when the surgeon sees them. The onset is insidious and extensive peritoneal metastases will have formed. There are other cases with large tumors which are resectable, for the tumor has a surface growth without metastases.

Vigilance on the part of the profession will increase the number of operable carcinomas of the stomach.

Johns Hopkins Hospital.

*Symposium of Anemia in Infancy and Childhood**

THE NORMAL BLOOD

HENRY T. PRICE, M.D.
PITTSBURGH, PA.

A brief study of the most important steps in the history of blood seems a proper introduction to this important subject and we can better understand the relation of each step in examination, with reference to pathologic conditions.

Galen, 131-201 A. D., showed that the arteries contained blood, but had no idea of circulation. Following Galen, several investigators hinted at the possibility of the circulation of the blood, but it was Harvey, 1578-1657, who made known this fact and to whom all credit is due for this discovery.

In 1658, the discovery of the corpuscles, by Swammerdam, was the most important step in blood examination.

In 1842, the third type of corpuscles, called platelets, was discovered by Donné and these elements were more fully described by Osler, in 1873, and Bizzozero, in 1883.

* Read before the Section on Pediatrics of the Medical Society of the State of Pennsylvania, Erie Session, October 3, 1929.

Virchow was the first investigator to observe and define leukocytosis and, in 1845, described leukemia as white blood.

A step of importance in blood examination was presented by Hewson in 1771 in his treatise on coagulation of the blood, but it was not until 1859, that Lister showed conclusively that coagulation of blood in the vessel depended upon injury to that vessel.

In 1733, Hales presented his treatise on blood pressure and this was the most important study of physiology of the circulation between the time of Harvey and Poiseuille. Poiseuille, in 1828, invented an instrument for measuring blood pressure and from his discovery the present mercury manometer has been developed.

In 1843, Andral was the first investigator to urge chemical examination of blood in morbid conditions, and in 1866, Pflüger presented his treatise on "Gasometry of the Blood," as the cause of dyspnea, apnea, and the mechanism of respiration.

Accurate data on the chemical composition of the blood are of comparatively recent origin and we owe largely to Folin, Benedict, and van Slyke, the development of methods which have made this work possible.

More recently, Slemons, Sedgwick, Marriott, Howland, and many other investigators have contributed valuable information to our knowledge of the chemical examination of blood in infancy and childhood.

The examination of the blood may be separated into two main divisions—first, morphology; second, chemistry.

Morphology

In the embryo, blood-forming tissues have been found in the liver, spleen, and lymphatics but at birth this tissue is limited mainly to the red bone marrow. As the child approaches adolescence this red bone marrow becomes limited to the ends of the long bones, the flat bones, and the small spongy bones. The most primitive cell found in bone marrow is the large mononuclear type and from them originate probably all the other cells produced in the bone marrow.

Nucleated red cells are present in the bone marrow and they are found normally in the fetal circulation and may be abundant in the first few hours after birth. They disappear rapidly from the circulation of the newborn and are not found normally after the first week.

The appearance of nucleated cells, polychromatophilia, reticulation and stippling is to be taken as a sign of blood regeneration showing the presence of younger forms of the red blood cells.

During the first week of life the number of red cells is increased, frequently 7-8,000,000 may occur. This is followed by a marked drop by the end of the second week and the number remains below 5,000,000 during infancy and childhood. When the red cells are increased, a high percentage of hemoglobin is also found and it may reach 120 per cent. At the same time the specific gravity is 1.070 compared to 1.050, the normal average of adult life.

The second formed element that appears in the blood is the leukocyte and the various forms are soon differentiated. During infancy and childhood the most numerous white cells found are lymphocytes and these are divided into the large and small types.

The proportions in which the different types of white cells exist normally vary considerably in infancy, less in childhood, and much less in adult life: polynuclears, 35-45 per cent; small mononuclears, 40-50 per cent; large mononuclears, 10 per cent; and, eosinophiles, 1-5 per cent.

The total count ranges between 10,000 and 14,000. In the first few days of life, when the volume and concentration of the blood is likely to be very high, the total leukocyte count may reach 30,000. Some investigators attribute this high count to the presence of colostrum, as food at this time of life.

During digestion, following a full meal, some investigators have recorded an increase in the white cells. As will be shown later by other writers, definite changes occur in the blood picture in certain specific conditions, but on the other hand at times there is an attempt on the part of the body to maintain a normal blood picture when clinically the patient is sick. This is a notable fact in the preleukemic stage of leukemia.

Some surgeons stress the altered blood picture as an indication for operative interference in acute surgical conditions but frequently the variation may be within normal limits in children, yet a severe condition may exist.

The third formed element found in the blood is the platelet. Under normal conditions they number about 250,000 per cm. and their main function is their action in the coagulation of the blood.

Chemistry

In 1848, Garrod presented his treatise on the presence of uric acid in the blood in gout and rheumatism, but as this substance has little importance in children, it will not be discussed.

The nonprotein nitrogen, which normally constitutes only about one per cent of the total

nitrogen of the blood, attracts greater attention at the present time to the bodies which form it than to the protein nitrogen. This study has special reference to acute nephritis and is especially pronounced in intestinal obstruction.

In cases in which the urea retention is high, it was noted that creatinin was appreciably increased and that nephritis was far advanced, therefore, the prognosis was very grave.

The estimation of hemoglobin was apparently the first chemical determination in the blood to find clinical application. During the first few weeks of life it exceeds twenty per cent but at the third month drops abruptly to fourteen per cent, and after the tenth year approaches the normal of sixteen per cent of the total solids of the blood.

The ability of the blood to absorb and take up oxygen depends upon its hemoglobin content and anything that interferes with this normal function causes great disturbance of the body. This function of oxygen content and capacity can be very definitely determined.

The estimation of the carbon dioxid combining power of the blood is the most reliable single method of ascertaining the severity of acidosis or alkalosis. The normal range for the carbon dioxid combining power is from 43 to 67 c.c. of carbon dioxid per 100 c.c. of plasma.

Associated with the determination of carbon dioxid is the hydrogen ion concentration of the blood. Van Slyke states that the normal range of blood reaction appears to be indicated by pH 7.30 to 7.50.

Under extreme, abnormal conditions the pH may fall slightly below pH 7 and by voluntary deep breathing carbonic acid may be thrown off until the blood alkalinity rises to pH 7.7. With the former condition, coma occurs, while with the latter, tetany is usually present. He suggests that the extreme of reaction compatible with life lies approximately between pH 7.0 and 7.8.

Howland and Marriott have shown that acidosis found in many cases of severe diarrhea, not of the ileocolitis type, is not due to the presence of acetone bodies but apparently to deficient excretion of acid phosphate by the kidneys.

The calcium content of human blood serum is very constant between 7 and 9 mg. per 100 c.c., averaging higher in children. In infantile tetany the calcium falls to between 3.5 and 7 mg. This condition can be relieved by the constant and persistent administration of calcium which will bring the serum content to 7.5 or more. Tetany appears to be the only condition constantly associated with a marked change in the blood calcium, although in some cases of advanced nephritis there may be a considerable reduction in calcium during the last days of life.

The inorganic phosphorus of the blood of normal infants and children averages slightly above 5 mg. per 100 c.c. In active rickets phosphorus appears to be regularly reduced sometimes as low as 2 mg. per 100 c.c. A low phosphorus may be found without many symptoms of rickets but on the other hand rickets seems to be the most important clinical disorder associated with low phosphorus.

That the blood contained a sugarlike substance was recognized by Dobson in 1775, but it was not until seventy years later that Bernard discovered sugar in the normal blood.

In 1913, Lewis and Benedict introduced a method of estimation, so simple that it could be used for clinical purpose.

The blood sugar of the normal person averages 0.10 per cent. With blood concentrations of 0.15 to 0.20 per cent the appearance of sugar in the urine is usually apparent depending on whether or not diuresis exists. In mild cases of diabetes, hyperglycemia is generally 0.2 to 0.3 per cent, although in severe cases the figure may reach one per cent.

Certain blood tests that are standard have other bases for determination. The Wassermann test is a complement fixation test, while the Kahn test used for the detection of the same disease is a precipitin test.

The matching of blood has become an important procedure since transfusion has become prominent in treatment. This test is an agglutination, and is necessary to avoid serious trouble when performing a transfusion.

Even with the careful study of the blood that has been described there are many more functions of this vital fluid which have not been discovered.

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SECONDARY ANEMIA

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A relative diminution in the percentage of hemoglobin or in the number of red blood cells may take place in three ways: first, by mechanical loss from the body; second, by increased blood destruction; third, by diminished blood formation.

The blood is kept normal by constant reproduction of red cells by the bone marrow to compensate for the destruction of red cells occurring in the ordinary body metabolism.

Bone marrow activity is normally a balanced process between blood formation and blood destruction. Anything which interferes with this

balance may cause anemia. We should know which of these processes is the more active or whether there is a combination of both, in order to arrive at a reliable prognosis.

Blood destruction is evidenced by excessive blood pigment eliminated in the urine and feces or circulating in the blood stream. Excessive urobilinogen is evidence and van den Bergh's test for pigment in the serum is evidence.

Lucas gives as accepted evidence of degeneration in the red cells, the presence of ghost or shadow forms, and achromasia; as evidence of degeneration in the white cells, fragmentation, poorly staining cytoplasm, swollen nuclei, heavily staining nuclei, and vacuoles other than in endothelial cells.

Defective blood formation will give a gradual reduction in the number of red cells, in the percentage of hemoglobin, in the percentage of blood platelets, reticulated red cells, and polymorphonuclear leukocytes. This defective blood formation may be due to the depresssion of bone marrow activity from the action of some toxins of an infectious process elsewhere in the body, or to marrow exhaustion as the result of an effort to function on an insufficient food supply.

If the marrow is capable of regeneration it will be shown by the presence of nucleated red cells in the blood stream, polychromatophilia, an increase in the percentage of reticulated cells, and, usually the last to come back, an increase in the number of platelets.

We often have the combination of a lack of, or lowered functioning power of the bone marrow and varying grades of blood destruction going on together, and the blood picture will vary according to which one of these is more marked at any one time; so that the study of the blood may show a process either predominantly destructive or due mainly to a disturbance in function or power to deliver red blood cells to the circulation. These two processes vary not only quantitatively but qualitatively often in the same case. In certain acute infections the anemia progresses so rapidly that it is hard to explain the onset as due entirely to diminished function. In such cases, in the early stages at least, blood destruction must play an important rôle. The continuation of the anemia from initial infections is usually more dependent upon a lowered function of the blood-forming organs rather than upon the blood destruction. In fact our methods of estimating the equation between diminished blood formation and destruction are not far enough advanced for us to be always in a position to state whether one or the other predominates, and in the lesser grades of blood production our methods may not be advanced enough at present to be able to detect at the same time low grades of blood destruction. In most secondary anemias, however, of any length, the diminished activity of the bone marrow is probably the more dominant factor in the production and continuation of the anemia. (*Lucas.*)

The following are given by Dunn as the principal general causes of anemia: (1) developmental; (2) myelopathic; (3) mechanical; (4) nutritional; and (5) toxic.

(1) Developmental conditions are probably always congenital—a hypoplasia of the bone marrow, seen chiefly in infancy, so-called aplastic anemia.

(2) Myelopathic anemia includes cases caused by tumor formation in the bone marrow or sclerosis of the bones. They are rare in childhood.

(3) Mechanical anemia caused by hemorrhage is rare and is seen after traumatic hemorrhage, and in the hemorrhagic diseases, scurvy, purpura, hemophilia, and hemorrhagic diseases of the newborn.

(4) Nutritional conditions are probably the most common causes of anemia in early life. They are usually the result of faulty feeding, the prolongation of an exclusive milk diet in the first year, or a badly balanced diet in the later years. In infants there may be an insufficient amount of the stored iron surplus. Chronic gastro-intestinal disturbances often cause anemia. Certain disturbances of metabolism such as rickets, and scurvy are frequent causes. In older children bad teeth, hypertrophied and diseased tonsils, and faulty hygienic surroundings may induce nutritional anemia. Koessel and Maurer believe that a definite relationship exists between a state of chronic vitamin deficiency and certain anemias; and that blood regeneration cannot take place without the presence of vitamin A.

(5) The toxic causes of anemia may be exogenous chemical toxins, endogenous toxins of metabolic origin, and endogenous toxins of parasitic and bacterial origin.

Lead is probably the chief chemical toxin causing anemia in childhood. Potassium chlorate and nitrobenzol are rare causes. Nephritis and malignant conditions (sarcoma, hypernephroma, etc.) are the chief conditions resulting in anemia of endogenous metabolic origin. Whipple suggests that the kidney is concerned in the conservation of material useful to the body for hemoglobin building, that injury of the kidney may disturb the function of hemoglobin conservation and the hemoglobin construction suffer with resultant anemia; that kidney diet is on a par with liver diet in the cure of anemia.

The largest group of anemias of toxic origin includes those due to bacterial toxins. In this group are the anemias associated with tuberculosis, syphilis, rheumatic fever, malaria, diphtheria, acute infectious diseases such as pneumonia, chronic suppurative processes, such as empyema, otitis media, etc. Certain of the in-

testinal parasites also produce a marked anemia.

The symptoms of the anemia will, of course, vary with the cause. Pallor of the skin and mucous membranes is the most characteristic sign. There is lowered muscle tone resulting in fatigue, rapid pulse, rapid respiration; sometimes, even in palpitation and dyspnea. In severe cases there may be edema. Headaches and nervous irritability are common. There is usually some fever. The appetite is poor and gastro-intestinal disturbances are frequent. Physical examination will show a systolic heart murmur and lowered blood pressure.

The mild cases show a moderate reduction in the percentage of hemoglobin and the number of red cells, the reduction in hemoglobin usually being proportionately greater. In the more severe cases there are variations in the size, shape, and staining reactions of the red corpuscles, and nucleated red cells appear. These variations in the red cells are particularly characteristic of the anemias of infancy, appearing in anemia of less severity than would be the case in older children. In infancy the erythropoietic tissue is working to the limit of its capacity under normal circumstances and responds to a stimulus for increased production by throwing out immature, imperfectly formed cells, macrocytes, megaloblast, etc.

Leukocytosis is usually present, most frequently a neutrophilic increase but a relative lymphocytosis is not uncommon in younger infants, and in cases due to gastro-intestinal diseases. In the severe forms in infancy, myelocytes are frequently found. In the aplastic type of anemia, the neutrophiles are much decreased, as are the blood platelets.

Enlargement of the spleen occurs in greater or less degree in infancy, and less often in later childhood. It apparently bears no relation to the degree or type of leukocytosis, nor to the changes in the red blood corpuscles, the enlargement being due to the cause of the anemia rather than the anemia. The liver may be enlarged for the same reason. The lymph nodes are frequently enlarged, generally because of the disturbed nutrition.

Removal of the cause is the most important step in the treatment. Probably next in importance is the diet. Whipple has shown that the best regeneration occurs on a mixed diet. Liver, red meats, and vegetables are the best type of mixed diet. Foods containing iron and pigment should be fed in the last half of the first year, i. e., egg yolk, spinach, prune pulp, prune juice, and beef juice. According to Whipple the following substances have been tested and found of value in treating anemias: kidney (sheep, calf, pig), chicken liver and gizzard, liver sausage, and blood sausage. The fact that fruits (apricots and peaches) are potent in experimental anemia would suggest the use of these in nephritis in which the protein intake is to be held low. He believes it would be of interest to test a variety of diet factors, kidney, extracts, vitamins, etc., in anemia. He says: "It seems scarcely debatable that secondary anemias due to hemorrhage can be controlled best by diet therapy."

Blood transfusion is probably the best method of stimulating marrow activity. Repeated small transfusions are frequently of great benefit.

The use of iron and arsenic has been customary for years and is recently the subject of much dispute.

Cooley believes he gets much better results with any treatment by the addition of hydrochloric acid.

In certain of the nutritional types of anemia, fresh air and sunlight with proper food are curative. The carbon arc lamp and quartz lamp are some times of value.

Westinghouse Building.

SEVERE ANEMIA

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By the term severe anemia, we have reference to that class of anemia occurring in infancy and early childhood, of unknown etiology. These anemias are characterized by a fair or good state of nutrition, rapid progress, yellowish pallor, greatly reduced hemoglobin, blood picture evidence of marked regeneration or degeneration, bleeding into the soft tissues or from mucous membranes, moderate or huge enlargement of the spleen, and by a fatal or poor prognosis. By definition we thus limit ourselves to a group of conditions, such as thrombocytopenic purpura, acute and chronic lymphoid and myeloid leukemia, so-called von Jaksch's anemia, hemolytic jaundice, sickle-cell anemia, pernicious, aplastic, and erythroblastic anemias, most of which show varying degrees of hemolysis.

In any study of this group one is impressed with the similarities encountered, and it is often difficult to interpret the picture from the facts at hand. Especially is this true in infancy and childhood.

This symposium has naught to do with those milder types of secondary anemia which may be potentially severe unless interrupted; nor, has it to do with the large group of severe secondary anemias. It is rather with the group, of which we are as yet ignorant regarding the

etiology, that we are concerned. These anemias are commonly called primary or idiopathic, and are usually fatal. Von Jaksch's anemia, though not so entitled, is placed in this group because it so frequently appears in the diagnostic scene in which it serves as an ill-defined, questionable entity covering a multitude of mistakes.

What is termed primary idiopathic today may become secondary tomorrow. As our knowledge of hematology increases, one by one, these so-called primary idiopathic anemias will become entities of definitely known etiology. It is interesting to note in passing, that the severe anemias of poor prognoses are those of unknown etiology; and little hope with therapeusis can be held so long as the provoking factor or factors remain hidden. We see the effect and because of the effect we are justified in our search for the cause. Regarding the etiology, one might speculate along many different channels. The most that can be said at present regarding the etiology, though broad and indefinite, consists of such terms as faulty anlage, noxa, deficiencies, and excessives. Much is now written about deficiencies of various factors as causatives and as much might be written in the future regarding excessives. We have all seen pernicious anemia approach one step nearer its solution; and one is safe in making the statement that the others in due time will follow. A diagnosis of primary or idiopathic this or that is inactivating. One is thus apt to close his thinking faculties, stand by for further announcements, and conclude the chapter, with a hopeless prognosis.

The oft associated infection occurring at the onset of the severe purpuras and the acute leukemias is significant; but whether such an infection plays a causative rôle is, as yet, not known. No specific microörganism has been definitely identified. That infections do play a prominent rôle in the symptomatic purpuras, is evidenced by the petechial and purpuric spots frequently occurring in fulminating diphtheria, cerebrospinal meningitis, etc. I cannot recall having ever seen a case of thrombocytopenic purpura or acute lymphatic leukemia in infancy or childhood that did not, at onset, show an associated condition with all the prominent earmarks of an acute infection.

In the study of the severe anemias of infancy and childhood, one is abruptly impressed with the meagerness of our knowledge of these blood reactions and their meaning. One is confronted by a tangle of facts, clouded by a rapid evanescent variation of the blood picture. Peculiar, atypical blood responses are seen most often in infancy and childhood. Thus mistaken provisional diagnoses are almost as frequent as the number of cases and follow closely the variations of the blood picture. In clinical presentation the opinions are as varied and many as there are physicians present. Most of what we know of these blood diseases in infancy and childhood is based on the study and research in hematology of the adult. To attempt to apply the adult's blood picture to that of the infant or child is wrong. In the adult, we find a matured hematopoietic system—a system broken in, by virtue of its having withstood repeated blows. It has definite clear cut responses. The adult blood-forming organs have a stable matured identity. Such is not the case in the infant. His system is new and as yet untested; the threshold, resulting in labile responses, is low, and under severe pathologic stress, his blood-forming organs seem in delirium. Under the slightest stimulus, one sees numerous granular and nongranular cells thrown into the blood stream. Under severe stress, the floodgates seem to be down and the blood picture is without order and defies interpretation. That this can occur, one need only recall what happens in the so-called von Jaksch's anemia, in which there are evidences of regeneration, numerous nucleated erythrocytes, erythroblasts, lymphoblasts, myeloblasts, myelocytes and marked leukocytosis. The whole blood-forming apparatus is stimulated. Again, in pneumonia in infants, one frequently sees a leukocytosis of 40,000 to 50,000 with myelocytes of sufficient numbers to make one suspect myeloid leukemia. In scarlet fever, one observes a polymorphonuclear leukocytosis with an eosinophilia; which is contrary to the usual sequence of events. In acute lymphoid leukemia in the aleukemic stage, a leukopenia as low as 1500 may be encountered and an almost complete aplasis of the thrombocytes. In this stage one is never sure that one is not dealing with a severe hemorrhagic purpura. And lastly, in that large class of severe or moderately severe secondary anemias, one is just as likely to see a baffling picture as one of easy interpretation. Often the diagnosis of leukemia would need revision were an autopsy secured. Diagnosis does not depend so much on the type of cell seen as it does on the relative and absolute ratio of these cells. One would not think of the diagnosis acute lymphoid leukemia in the absence of a thrombopenia associated with relative or absolute lymphocytosis. Myeloid leukemia would be out of the question in the persistent absence of any of the cells of the granular series. One must doubt the entity aplastic anemia if evidences of regeneration and thrombocytes are present. Per-

nicious anemia, though rare under ten years of age, must present such signs and symptoms as good nutrition, yellowish pallor, hemorrhage, remissions, glossitis, achylia gastrica, evidences of combined degeneration of the lateral columns and the pyramidal tracts, hemoglobin ratio above one, increased size of red blood cells, evidences of regeneration, megaloblasts, lymphocytosis, normoblasts, normocytes, leukopenia, reticulocytes, and a thrombopenia.

Sicklemia is usually found in negroes. There is a varying degree of anemia characterized by remissions; and a color index slightly above one. The sickle-shaped cell is diagnostic and involves only the red blood cell. The leukocytes are often much increased. Numerous nucleated red blood cells may appear in the blood stream. Hemolysis is always present and often to a marked degree in the severe cases. There may be as many as forty per cent or more of the sickle-shaped red blood cells. In the active stage one sees very large numbers of reticulocytes. The spleen is moderately enlarged. Splenectomy does little good. The normoblasts, often present in considerable percentage before the operation, diminish greatly in number after splenectomy. With this postoperative decrease in normoblasts, one sees the reticulocytes increase in numbers, and an unchanged sickling. Hemolysis continues unchecked. Thus the rôle played by the spleen is speculative and from the evidence at hand, one is not inclined to place the fault there. On the other hand, the evidence points toward an inherited factor in faulty red blood cell production. In regard to prognosis, the severe cases die while the milder ones continue to live and to pass into and out of remission after remission. Whether these mild cases eventually grow worse is as yet not known. Unquestionably, inheritance plays a part. Under suitable circumstances a doubling of hereditary factors, when both parents have sicklemia, may result in a severe case in the offspring.

Hemolytic jaundice, also known as familial jaundice, involves primarily the red blood cells. Of all the conditions mentioned, it has the best prognosis and lends itself most easily to definiteness in diagnosis and treatment. This, also, appears to be a congenital disease or a congenital diathesis presenting its characteristic features very early in life, and limited to definite regions and certain people. Its frequency probably depends upon the fact that it and life are fairly compatible.

Symtomatically, one may see, in an apparently healthy subject, a deep lemon-tinted yellowish discoloration of the skin, mucous membranes and sclera constantly present, though varying in intensity. This discoloration differs from that seen in obstructive jaundice which presents a greenish yellow cast. The abdomen is not enlarged to any great extent. The spleen is moderately enlarged and can usually be palpated early a little below the costal margin; later shrinking to a small cicatrized mass, too small to be felt. In this condition the analysis of the blood gives definite information. Numerous microcytes are said to be a characteristic feature. There are many nucleated red blood cells. No other blood disease presents so many reticulated red blood cells. The blood shows a great increase in hemolytic products and a characteristic feature is the greatly increased fragility of the red blood cells to hypotonic salt solutions. This is a cardinal feature of the disease. The urine usually shows urobilin. There is nothing characteristic about the white blood cells. Removal of the spleen usually gives good results; the hemolysis is greatly reduced or stops entirely and the jaundice fades away slowly and permanently.

The last of this group to be considered is erythroblastic anemia. It is quite probable that many such conditions have been called von Jaksch's anemia, especially those of early fatal termination. Erythroblastic anemia and von Jaksch's anemia have many things in common. It is questionable whether the vague von Jaksch's anemia deserves to stand as an entity. As much can be said of the term erythroblastic anemia. It is a term, descriptive of the most pronounced phenomenon seen in the blood in this condition. In the use of the term one must not forget that most of the anemias at some stage show erythroblastic activities. No other condition, however, shows such an overwhelming erythroblastic activity. Cooley mentions that the condition is more common in the Mediterranean races and almost peculiar to them. It is a severe blood disease of infancy and early childhood with a fatal termination. It thus may be racial but not hereditary.

Its chief characteristics are extreme pallor, lemon-tinted complexion with slight edema about the eyes, very little bleeding from the mucous membranes or into the soft tissues, huge enlargement of the abdomen, caused mostly by the enlargement of the spleen. The spleen rapidly extends to the left iliac crest. It is smooth and firm with sharp edges and tender to palpation. The splenic notch is easily found.

Children with this disease are very irritable, and refuse solid food but take large quantities of milk and liquids. There is a constant afternoon elevation of temperature from 101° F. to

103° F. by rectum without any apparent cause other than the blood dyscrasia.

The blood analysis shows many interesting features: The hemoglobin may go so low as eighteen with a color index below or near one.

The red cells show marked alteration of size, shape, and staining, and many microcytes and macrocytes are present. Basophilic stippling is pronounced. The red cell count rarely goes below two million. There are vast numbers of nucleated red blood cells in all stages of development and these are actively mitotic. Many of the nucleated red blood cells show densely stained cart wheel nuclei surrounded by a dirty looking cytoplasm taking a basophilic stain. One frequently sees a fine punctate basophilic stippling in the cytoplasm surrounding the nucleus as well as very coarse basophilic cytoplasmic masses. The cell wall of these atypical nucleated erythroblasts shows extreme fragmentation and unless viewed closely may be mistaken for marginal crenation. Such cells are probably atypical nucleated red blood cells but typical of this condition and an expression of a severe bone marrow stimulation involving erythropoiesis. Older red blood cells still possessing a nucleus show this nucleus undergoing extrusion. In a total count of say, 70,000 nucleated cells (including red and white cells), as many as three-fourths of them will be nucleated red blood cells. This evidence of great erythroblastic activity is a most pronounced feature and possibly indicates excessive ectopic hyperplastic erythropoiesis. Cooley and his associates called attention "to the extreme hyperplasia of the bone marrow in erythroblastic anemia." The average size of the red blood cell is about six to seven microns. The reticulocytes are numerous.

Among the white blood cells one sees very few lymphocytes. The granulocytes vary markedly up or down in numbers. At critical periods they are numerous and show large numbers of myeloblasts and myelocytes and many large cells difficult to classify. The neutrophiles are mostly early cells two or three lobed, with poorly staining granular material. The platelets are reduced and vary between 100,000 and 200,000. The van den Bergh's reaction often indicates excessive hemolytic products. The fragility test shows increased resistance to hypotonic salt solutions. The disease is steadily progressive; showing only slight remissions; and ending fatally.

Summary

1. The anemias of unknown etiology are all severe anemias.

2. They are usually fatal (except hemolytic jaundice).

3. Blood diseases in infants and young children are too little understood.

4. One should not attempt to fit the blood picture of the adult to that of the infant.

5. The infant's blood-forming organs are extremely labile.

6. Brief findings in various severe anemias have been outlined.

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BLOOD TRANSFUSION IN INFANCY AND CHILDHOOD*

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The last ten years contain practically all literature of blood transfusion as related to children. The first transfusion was performed on a child by Dr. Alexis Carrel, in 1908, for hemorrhagic disease of the newborn. Lindemann, in 1913, reports a series of cases in which he used a syringe method and special cannula, passing the blood into the internal saphenous vein. Kerley reports nine cases in December, 1917. Löwenberg reports thirteen cases in 1921. Robertson, Brown, and Simpson write of transfusion, in 1921.

Selection of Donor

In making a blood transfusion, a suitable donor must be selected. The discovery of the agglutination of blood cells in 1900 by Landsteiner and Shattuck, working separately, followed by the classification of four blood groups by Jansky, in 1906, and Moss, in 1910, established the transfusion of blood on a scientific basis. The method used is to mix a loopful of the prospective donor's cells and the recipient's cells separately in separate preparations of known groups II and III sera. By the agglutination or lack of such, the blood group is determined. The donor should match the recipient, with the preparation standing twenty to thirty minutes before the final reading is made by one accustomed to such work. Universal donors are never used except when cross agglutination is first done, i. e., the patient's cells plus the donor's serum and the patient's serum plus the donor's cells. This is not a routine for in our experience covering two hundred and eighty-six transfusions and in six hundred reported by Carleton, no reactions of more serious nature than minor temperature elevations and chills followed this method of matching. The blood group can be definitely established in seventy-

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five per cent of children at birth and is fixed definitely after the first year of life. We have only had three or four children whose group could not be determined definitely. The group may be temporarily changed following certain drugs, x-ray therapy, and general anesthesia (Vorshutz). It is said that hemolysis does not occur without agglutination. Sidbury states that he has seen hemolysis in cross agglutination and cites two clinical cases. We have not had this experience. We have typed 899 persons since January 1, 1927, and have had no untoward reactions as a result of incompatibility.

TECHNIC

Transfusion is a surgical procedure demanding aseptic technic. The vein of the donor is entered at the antecubital fossa. A drop of novocain eliminates pain of skin puncture. A tourniquet is applied, preferably a sphygmomanometer cuff inflated to an amount just above the patient's diastolic pressure. A large-gauge needle with short bevel is used. The blood is withdrawn by the operator in 20 c.c. syringes and passed by the nurse to the second operator who injects the same into the recipient. This is accomplished by anesthetizing the skin of the ankle just above the internal malleolus incising transversely and by blunt dissection isolating the saphenous vein as it passes upward just in front of the internal malleolus. The vein is looped with two catgut ligatures, the lower of which is tied off. The isolated vein is opened in an upward direction with fine, curved, manicure scissors which must have precise points. The needle is inserted in the opening and tied in place with the upper ligature. Saline is first injected to establish the correctness of position. If tissue swelling and return of fluid into the wound are encountered, or force is necessary for injection, the needle should be withdrawn and either reinserted in the same or a different place. No vein has yet been encountered too small to allow insertion of a gold needle, about 16 gauge, with blunted point and short bevel. The location described is that of choice. The basilic veins in the antecubital fossa, or the internal saphenous vein as it enters the saphenous bulb, may be used. Very small infants may be transfused into a scalp vein above the hair line, although we have never used this site. The above method may be modified in two ways if the recipient is a septic case. (1) The recipient is made a separate unit. Nothing which comes in contact with him is returned to the scrub table, syringes especially being discarded out of the system once used on the recipient. This requires a varying number of clean syringes according to the amount of blood required. (2) The donor is brought alone into the room and the blood withdrawn in syringes containing sufficient citrate to make a 0.4 per cent solution which will prevent clotting. The donor is then removed and the recipient brought in and injection carried out in the method described. This method has the advantage of absolute safety and the rate of injection can be governed to suit the case. Because of the lack of coöperation on the part of our recipients, we have cut down and tied our needle in place in all but a few cases. The nurse holds the member.

We use the syringe method of transfusion because:

(1) It is simple. (a) One link may break down and some other part of the set-up may be maintained by the injection of a solution of saline until the trouble be rectified. (b) The materials are inexpensive and always at hand. (c) It is easy to teach to interns and junior residents.

(2) The rate of injection can be more perfectly controlled than by a machine.

(3) Whole, untreated blood can be used in all cases, if necessary.

(4) It is the method we are accustomed to using, hence we obtain better results than with some method of which we have no knowledge.

Amount Injected.—Ten to fifteen c.c. per pound body weight can be safely used. In patients who have a myocardial weakness, less than 10 c.c. per pound is advisable.

Time of Injection.—The first one or two syringes should be given as slowly as possible and the patient watched for anaphylactic reaction. The average time of injection is from ten to fifteen minutes; if the citrate method is used, the injection should be made much more slowly.

REACTION

In this series of 268 cases, we have had 34 reactions; 27, mild temperature; 4, of temperature with chills; 1, urticaria. In 3, the reaction led up to death; 2 of these cases were severe cardiacs transfused because of profound anemia and in practically moribund condition; the third, a septicemia which developed dilatation of the right heart, and did not respond although some blood was withdrawn.

The treatment for reaction is usually atropin given hypodermically; or if severe, adrenalin. In cyanosis with rapid pulse, cough, cardiorespiratory embarrassment, it is best to withdraw some blood. This cannot be done through the transfusion vein as it is tied off from behind. In infants, we use the fontanel for this purpose; in older children, some other superficial vein.

Indications for Transfusion

I. *Feeding Cases.*—These children usually have a varying degree of secondary anemia. This series includes pylorospasm, and patients who have not done well under feeding care, i. e., underweight, undernourished, rachitics, etc.

(a) Of 25 children without parenteral infection, 20 improved; 2, were unimproved (one a postoperative gastrostomy); 3, died.

(b) Of 27 children with parenteral infection, i. e., nasopharyngitis, otitis, bronchitis, pyelitis, furunculosis, bronchopneumonia, 17 improved; 2, were unimproved; 8, died. This series includes marasmus with parenteral infection.

(c) Of 5 children suffering from marasmus, without parenteral infection, 4 improved; 1, died.

(d) Of the 5 children with diarrhea (including only the very severe cases for many of the mild are classed under feeding disorders), 1 improved; 4, died.

(e) Of the 6 prematures, 3 were without infection and improved; the 3 with infection, died.

II. *Intoxications.*—These cases, caused by either feeding or infection, are drowsy or semicomatose, hyperpneic, dehydrated children with acetone bodies present. Of the 12 children afflicted with intoxication, 6 were cured; 6, died.

III. *Congenital Syphilis.*—Of the 8 syphilitic children, 3 died (1 was a bleeder, 1 had pneumonia); 5, improved.

IV. *Eczema.*—Of the 7 children who had eczema, 6, improved; 1, died (pustular type and extremely toxic). A transfusion had no effect upon the skin condition but was given because of toxic symptoms or nutritional disorder. One child developed moderately severe urticaria immediately following direct transfusion. This child also had double otitis and later mastoiditis. It is better that the blood of patients showing allergic phenomena should be cross agglutinated.

V. *Pneumonias.*—These children were either extremely toxic or extremely anemic. Of the 3 children who had lobar pneumonia, 2 died; 1, improved. Of the 6 children who had bronchopneumonia, 3 were transfused during the acute stage, but no benefit occurred and the children died. Three were transfused during convalescence and had anemia, but showed marked improvement.

VI. *Heart Cases.*—There were 8 children with diseased hearts. Of the children who had congenital heart disease, 3 were transfused because of severe anemia, and improved. One, undiagnosed till after transfusion, died, death having no relation to transfusion. There were 4 children with acquired heart disease; all died. These cases were the worst type of risk and we do not hesitate in stating that carditis is a contraindication for blood transfusion.

VII. *Septicemia.*—We can only bear out the statement of Carleton, the hopelessness of transfusion as a curative measure in septicemia. Of the 13 children who had septicemia, 12 died. Of the 3 with streptococcus infection, 2 died: 1, improved. Six, who had a staphylococcus infection, died. A child who had a pneumococcic infection, died; also a child with sepsis neonatorum died. Two children had an unclassified infection and died.

VIII. *Erysipelas.*—This group should be given small transfusions (i. e., 10 c. c. or less per pound bodyweight), frequently repeated. Of the 3 children with erysipelas, 2 were cured; 1, died. These were very severe cases and we feel transfusion was a help.

IX. *Burns.*—In combating primary shock or secondary toxemia, transfusion is a most invaluable asset. Of 8 children who had been burned, 6 improved and 2 died.

X. *Blood Diseases.*—As shown by the following, results vary markedly with the type of case transfused:

Of six children with secondary anemia, 5 were improved; 1, died. A child with Henoch's purpura was improved. A child who had aplastic anemia was given 6 transfusions and died. A child with erythroblastic anemia still under observation, was improved. Of five children who had leukemia, 4, with lymphatic, died; 1, with myelogenous, was temporarily improved, but was lost track of. Two children who had purpura simplex, with secondary anemia, were improved. A child with purpura rheumatica was improved. Two children had purpura hemorrhagica, and died (1 following splenectomy). Three children with hemorrhagic disease of the newborn were cured. One child with anemia, cause unknown, was unimproved. A child with hemophilia was temporarily improved. A child with Hodgkin's disease, died.

In the secondary anemias, the purpuras, and hemorrhagic disease of newborn, transfusion is strongly indicated; in fact, is a curative measure in the last mentioned. In the other diseases, it is merely a temporary aid.

XI. *Surgical Cases.*—Transfusion was used in 6 instances of intussusception; all died. Two were diagnosed at autopsy; 3 had anastomosis performed; and 1 was moribund on admission. Of 3 children transfused, after pyloric stenosis, 2 improved, 1 died. A child, transfused following an operation for congenital intestinal atresia, died. A child, transfused after an operation for congenital obstruction by peritoneal band, was

helped. Transfusion, following a gastrostomy, improved a child; after a laparotomy (hypospadias, amebiasis), improved a child. Five children were improved when transfused after operation for empyema. Three children operated on for chronic osteomyelitis were improved. After an operation for suppurative arthritis, a child was improved by transfusion. A child, transfused after a mastoid operation was improved. Two children who had hemorrhage (posttonsillectomy) were improved by transfusion.

XII. *Unclassified Infections.*—

TABLE 1

	Cases	Improved	Unimproved	Died	Undetermined Course
Feeding					
(a) Without parental infection	25	20	2	3	....
(b) With parental infection	27	17	2	8	....
(c) Marasmus	5	4	....	1	....
(d) Diarrhea	5	4	....	1	....
(e) Prematures					
With infection	3	....	....	3	....
Without infection	3	3	....	....	....
Intoxications	12	6	....	6	....
Congenital Syphilis	8	5	....	3	....
Eczema	7	6	....	1	....
Pneumonias					
Bronchopneumonia					
Acute	3	....	....	3	....
Convalescing	3	3	....	....	....
Lobar	3	1	....	2	....
Blood Diseases	25	11	....	9	5
Heart Cases					
Congenital	4	3	....	1	....
Acquired	4	....	....	4	....
Septicemia	13	1	....	12	....
Erysipelas	3	2	....	1	....
Burns	8	6	....	2	....
Surgical Cases	23	15	....	8	....
Tonsil Bleeders	2	2	....	....	....
Unclassified	7	3	....	4	....
Total	193	112	4	72	5

Three children who had meningitis died. A child with encephalitis died. One, with acute tonsillitis, erythema, multiforme, and anemia, was improved. A child who had intestinal parasites was improved. A child with acrodynia was improved. The results of these twelve groups are summarized in Table 1.

Of 286 transfusions, 199 were direct; 69, indirect; 11, undetermined; 1, intramuscular; 6, Soresi. Of the reactions following transfusions, 27 were mild; 4, severe; and 3, died.

119 S. Highland Avenue.
Children's Hospital.

ABSTRACT OF DISCUSSION

Of Symposium on Anemia in Infancy and Childhood

J. GIBSON LOGUE, M.D. (Williamsport, Pa.): I should like to ask Dr. McCluskey if blood could be given in the peritoneal cavity without first being matched. It is customary that the blood is matched, but there is a belief on the part of some that it is unnecessary.

DR. MCCLUSKEY (in closing): Work shows that agglutinins and hemolysins are absorbed through the peritoneum, hence it would not be a safe procedure. Further, a recent case report shows blood unabsorbed from the peritoneal cavity, which would be unsatisfactory to the patient.

ETHER ANESTHESIA IN OTOLARYNGOLOGIC CASES*

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The choice of the agent used to anesthetize patients of this type, namely otolaryngologic, is one that has been given much thought by all concerned, and very justly so.

When one considers the enormous amount of work now being done, surgically, in nose, throat, and ear cases, by different types of surgeons, and their various methods, and not always under ideal circumstances, one must give the anesthetic agent and its method of administration careful consideration.

The safety of the patient is naturally uppermost in all our minds, and just so that degree of safety is made up of many factors, all of which must be taken into account. Surgeon and anesthetist should always strive for what is best for that particular patient.

With our every increasing knowledge of the pathology caused by the administration of any anesthetic, by the knowledge gained in the operating room, the points of view of the surgeon, the family physician, and even the patients themselves, the older idea of *any anesthetic* given by *any one* is in the discard.

This branch of surgery deals with a large scope of cases, one covering a variety that calls for sound judgment. These patients range from the very young baby to the aged, from so-called easy cases such as adenoidectomies, to the extremely difficult laryngectomy, and in a narrow field of operation, on tissue that is either soft and pliable, or on bony structures. These facts should all be noted when deciding upon the agent employed to produce surgical anesthesia.

It is not the writer's intention to go into detail as to the actual administration, but more to

* Read before the Section on Eye, Ear, Nose, and Throat Diseases of the Medical Society of the State of Pennsylvania, Erie Session, October 1, 1929.

try to picture to you the necessity of consideration of several small points that go to help in the make-up of a successful operation, and especially as seen by the anesthetist.

While the major responsibility rests with the surgeon there are many times when the anesthetist can, and should, aid him. In this class of surgery there is surely the need of maximum coöperation between the two. Team work is needed here as much as in any variety of operative surgery.

Preoperative Care.—This, with the preparation for any anesthetic, should always be given careful attention. The time to detect and correct abnormal conditions is before operation, and not after they have given trouble. Today, with the large number of so-called minor cases, such as tonsillectomies, and because the majority of these are in children, there is a tendency to overlook, or rather not look for, the small but troublesome points.

A careful physical examination should always be made. While children may be freer of the more serious conditions found in adults, they nevertheless do not have the resistance seen in the older person. Their more rapid loss of body heat, their poor respiratory muscles, etc., are factors which must be given thought. Often an enlargement of the thymus gland is missed, just for the want of a simple x-ray picture.

The admission of a patient a few hours before operation, after a night and morning of restricted diet, may give a urinary picture that is false; better if the urine be examined a day or so before the operation. The careful inspection and examination of nose and throat for acute coryza, or cold, so preventing any postoperative lung complication, is essential.

The possibility of the developing of an acidosis with its attending symptoms as a postoperative danger is a point to be considered. The prevention of such is best accomplished by the building up of the alkaline reserve in the blood, and this is easily done by sodium bicarbonate given in doses of one or two grains for each year of age, to be given after meals for two or three days previous to the operation.

The use of glucose, given either by mouth before, or as a Murphy drip after the operation, will bring the same results.

The absence of any food in the stomach is another desirable factor. Too often the anesthetist is reminded that the child has been allowed food, and by eliminating this, one of the causes of a lung abscess from inspired particles is removed.

The use of some form of opium together with atropin sulphate before the operation is one to be governed by the severity of the operation and the age of the patient. In the younger children it is not necessary, although a small dose of atropin will lessen the secretions of the upper air passages and act as a respiratory stimulus.

The major operations in adults call for such help as is received by this medication. While complete relaxation is not always desired, the open mouth, the use of a suction apparatus, and the difficulty of continuous anesthesia call for such help; and especially in adult tonsillectomies that require a general anesthetic.

Otolaryngologic operations may be divided into two classes for discussion of the advantages of ether as the agent used to produce anesthesia.

The first, or minor type, class includes such as tonsillectomy, simple mastoidectomy, plastic of nose and mouth, etc. In this type one is permitted a larger choice for use, as ether, nitrous oxid, ethylene, and possibly chloroform. Ether certainly has many points in its favor.

A large percentage of this class consists of children up to six years of age; and these younger patients do better as a rule under ether. Their poorly developed chest muscle and diaphragm, the narrower field of surgical anesthesia, etc., make one hesitate in the use of nitrous oxid as a routine measure.

Ether by the open drop method surely may be used to great advantage, and while it takes longer to induce anesthesia, and has the disadvantage of odor, if a little care and discretion are used in obtaining the confidence of the patient these can be overcome. A visit by the anesthetist to the room sometime before operation brings the first contact. A few minutes of play will be time well spent, and at this time a fairer judgment may be obtained as to the type of patient than when in the anesthetizing room. It is remarkable how easily his mind may be diverted by suggestion. There is always the circus, the seashore, school, and many other subjects to talk about. And by asking questions and receiving answers the child does not realize that you are gradually lowering the gauze with the ether over his face. If there is any tendency to choking, coughing, or objection on his part, a breath of fresh air will hurry, rather than delay, matters.

It is true in the very young, and when the second stage is reached in the older, the anesthetist may proceed more rapidly, or as rapidly as safety will permit, to complete the induction. Always bear in mind the more haste the less speed, and the majority of patients will go to sleep with no disagreeable sensations, and as quietly as if going into a natural sleep. Further-

more, they will wake up with no dread of ether anesthesia.

In the older patients the usual procedure calls for a nitrous oxid-oxygen induction followed by ether maintenance. The ether to be administered by open drop or insufflation by means of a mouthpiece connected to the electric pump delivering the warmed vapor directly into the side of the mouth. The same absence of hurry should be exercised, a slow nitrous oxid flow with sufficient oxygen being given to prevent any discomfort to the patient.

The small length of time required to produce unconsciousness is an advantage, and the ether should be started as soon as anesthesia is produced, continuing with a decreasing percentage of nitrous oxid until ether narcosis is obtained, and then the gases discontinued entirely, and a carry on maintained with the open drop method.

The advantages of ether so employed are:

(1) At no time is your patient in the stage of anoxemia, or without sufficient oxygen in the blood.

(2) Any degree of relaxation may be obtained. This is an important point in anesthesia for throat cases. This degree may depend upon what the surgeon requires or wishes, but it is better to keep just short of abolishing the throat reflexes. The surgeon is given more time to do a less mutilating operation, and allows time for a careful survey of the results as to bleeding, etc.

(3) Ether acts as a stimulant to the circulatory system, and if properly administered in just sufficient amounts is a help in overcoming shock.

(4) It gives a wider range of safety to the patient when used by one not especially skilled in general anesthesia.

The disadvantages are the same as in other types of cases:

(1) It cannot be used in the presence of acute disease of the respiratory tract.

(2) It is followed by more nausea and vomiting, but in most cases some blood is swallowed, and an emptying of the stomach before or on return to bed is not undesired.

(3) It increases the flow of mucus and saliva. As most operators now use some form of suction apparatus while operating, this objection is easily overcome.

(4) It causes pathologic changes in some of the body tissue. These changes vary as to the degree of oversaturation caused by its improper administration.

The second class, or major type of cases, such as radical mastoidotomy, extensive sinus, prolonged mouth operation, etc., call for a more careful technic by all concerned, and in order to facilitate matters the anesthetist is best out of the field of operation.

This may be accomplished by several methods, namely, intrapharyngeal, intralaryngeal, intratracheal, and rectal, or colonic anesthesia.

Such methods used in any anesthesia probably call for need of more careful watching, because some of our guides, as shown by eyes, pupils, etc., are completely blotted out by the sterile coverings.

Therefore, the anesthetist should note the other symptoms even more closely. This may be accomplished from his position by the side of the patient. There he can note equally as well the respirations and their character, and *if any one sign is helpful it is the character of the breathing.* The pulse and blood pressure are easily accessible, and the finger nails, together with the blood, in this field of operation will show the color of the patient. A careful watch must be exercised, by the surgeons in their manipulations, to prevent any interference with the respirations.

Of the various methods the intratracheal and rectal call for more skill and careful technic. In the intratracheal, we depend upon the delivery of the ether vapor directly into the trachea just beyond the vocal cords. This is accomplished by using some form of catheter which is introduced into the larynx beyond the cords by means of a Jackson's laryngoscope.

For such introduction the patient is best in rather deep anesthesia, as the relaxed throat will aid in the placing of the catheter, and especially to one not particularly skilled in bronchoscopy. Care must be practiced to prevent any injury to teeth, tongue, or vocal cords. The anesthesia is then carried on by some mechanical method, depending upon the method used, namely, if the opening into the larynx and past the cords is entirely occupied by the catheter, which allows of no escape of expired air, then the pressure of the inhaled ether should be negative and allow expiration by means of the catheter, and so prevent any injury to the lungs.

Dr. Flagg, of New York, has devised a simple but satisfactory method. This calls for the use of a flexible gold wire-wound catheter which fits snugly into the larynx. To the end projecting from the mouth is attached a soft rubber tube, about 18 to 20 inches in length, and to the other end of tubing is attached an ordinary ether can, with several large holes punched in the shoulder of the can. The can contains a small amount of ether, and by slight agitation the ether is vaporized, and as the patient inhales and exhales through these openings sufficient

ether is taken up to produce any degree of anesthesia required.

The other method gives sufficient opening around the catheter to allow exhalation. There the ether pressure should be positive in order to overcome the dilution that is caused by the inspired air and may cause difficulty in maintaining anesthesia.

There are several machines that will deliver a constant, even flow of warmed ether vapor. The machine must have some type of gauge to show constantly the pressure of gases in the lungs. This pressure is best maintained at about 20 to 25 mm. and much increase over this calls for an immediate secession of the flow of ether until the cause of the obstruction to returning vapors is removed.

Ether anesthesia by this manner, namely intratracheal, is most satisfactory. It is possible to maintain anesthesia for any length of time. The fact that warm ether vapor is delivered directly into the bronchus permits a minimum amount to be used. There is a rapid recovery from the narcosis, with seldom, if any, vomiting. If care is used there is no injury to vocal cords. There are several advantages in using ether over nitrous oxid-oxygen for this form of narcosis.

(1) In the beginning the introduction of the catheter into the larynx requires a relaxed throat. With nitrous oxid this is often difficult to obtain, and unless one is especially skilled in the handling of the laryngoscope there is trouble in the placing of this catheter.

(2) The cost of maintaining with nitrous oxid is also a factor. While cost should never be considered against safety in any form of administration, the saving to the hospital should be taken into account.

The same principal reason for the use of colonic, or rectal anesthesia, holds as in intratracheal, namely, the removal of the anesthetist from the field of operation. With this type of administration only ether may be used, and the technic usually followed is that developed by Dr. Gwathmey. There are slight modifications, the uses of which are governed by the case in question. This calls for the injection into the rectum of a mixture of ether in olive oil, the percentage variant, depending upon the physical development, the age, and time of anesthesia desired.

Some points, essential to success, are:

(1) The rectum and lower colon should be completely evacuated of any fecal matter, which is best accomplished by repeated colonic irrigations.

(2) Preliminary medication is necessary.

(3) The injection should be given slowly as any hurry will cause discomfort to the patient.

(4) It is best carried out in the quiet of the patient's room, rather than in the operating room.

(5) Careful watch of the patient should be maintained, any difficulty in respiration, when there is a clear airway, any degree of cyanosis, or too rapid a narcosis, calls for the immediate removal of the contents of the rectum.

The advantages of rectal oil-ether anesthesia are:

(1) Less irritation to the respiratory tract. The ether by its absorption into the blood becomes warmed to body temperature before it reaches the lungs and so causes less irritation.

(2) No postoperative nausea and vomiting. This is especially desired in the type of cases under discussion.

(3) Lack of disagreeable symptoms to the patient. He enters into an ether narcosis very similar to a natural sleep.

(4) The simplicity and ease of administration.

Its disadvantages are:

(1) Because of the necessity of a thorough preparation, it is not available in emergency cases.

(2) While the mucous membrane of the intestines absorbs only about two ounces of the mixture an hour, there is a small time consumed in the withdrawal if it becomes necessary. So there is not the absolute control as seen in inhalation.

(3) It is contraindicated in all diseases of the rectum and colon because in the presence of such disease there is an added irritation.

Before concluding, let me call your attention to the valuable aid which we now have in carbon dioxid, in five to ten per cent in oxygen. This adjunct to anesthesia given during the operation along with whatever agent used is most helpful. The stimulation to the respiratory center gives a smoother anesthesia, causing less effort on the part of the patient, and keeps the patient well oxygenated. A few minutes of administration after the operation is complete hastens the recovery of consciousness, and materially lessens any gastric disorders.

In conclusion, it may be said for ether that it does have decided advantages over the other agents used in this branch of surgery.

While it is well known that prolonged administration leaves definite scars on some of the body tissues, all these should not be blamed on ether, but rather some on the person administering it.

With a careful technic in which only a sufficient amount is used to maintain surgical anesthesia, and at the same time sufficient oxygen given to maintain the proper oxygenation of

the blood, these changes will be reduced to a minimum.

Ether does give relaxation, or the degree of relaxation required for that particular operation. At the same time it is the one agent that acts as a stimulant. Finally, it does not call for special apparatus in the majority of cases, or one trained in the use of that apparatus.

Ether gives a broader field of safety than nitrous oxid or chloroform, and so allows a more general use by those persons not especially skilled in the art of anesthesia.

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NITROUS OXID-OXYGEN ANESTHESIA FOR TONSILLECTOMY*

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In selecting an anesthetic for any operation there are three chief considerations, two of which pertain to the patient and one to the surgeon. For the patient the anesthetic should be chosen, first, with regard to safety during the operation and second, with regard to freedom from postoperative complications; and for the surgeon, from the standpoint of performing the operation as successfully as possible.

In the selection of an anesthetic for tonsillectomy we have for our consideration local anesthesia which includes surface application, infiltration and nerve block; among the general anesthetics suitable for tonsil operations we have chloroform, ether, ethylene-oxygen, and nitrous oxid-oxygen, or any combination of these. Before making a decision in a given case we should consider first the pathologic condition, if any, from which the patient is suffering, in addition to diseased tonsils and the possible effect of the various anesthetics upon this condition, both during the operation and afterward; second, the availability of a qualified anesthetist to administer a given anesthetic, and in the case of gas-oxygen, the availability of apparatus and supplies; third, the history of any previous use of local anesthesia with its reactions upon the patient; fourth, the conditions under which the surgeon can do his best work; and fifth, the financial ability of the patient to pay for the gas-oxygen, the expense of which for tonsillectomy is about ten dollars an hour.

Chloroform.—Chloroform is a marked circulatory depressant with a high mortality rate which does not always seem to be dependent upon lack of skill in its administration and not infrequently it does serious damage to the liver and kidneys. In the writer's opinion it should not be used for tonsillectomies, although some anesthetists claim that it is safe if deterioration of the chloroform is avoided by opening a fresh bottle each time; if it is given with oxygen, a Trendelenburg position should be maintained during the operation and for several hours afterward. The writer has had two near deaths administering chloroform for tonsillectomy.

Ether.—Ether has the widest margin of safety and is the choice of anesthetics in the hands of a novice when safety of the patient during the operation is considered. An improperly administered ether anesthesia, however, especially for a tonsillectomy, is likely to be productive of postoperative complications, the avoidance of which is dependent in a large measure upon the skill of the anesthetist. Ether is contraindicated in respiratory diseases, nephritis, and acidosis. Also in myocarditis there is likely to be a stage of excitement during induction and the extra strain upon the circulation might cause an acute dilation of the heart.

Ethylene-Oxygen and Nitrous Oxid-Oxygen.—Ethylene-oxygen and nitrous oxid-oxygen have the following points in common: They are nonirritating to the mucous membranes of the respiratory tract; are far less toxic than chloroform or ether in their effect upon the liver and kidneys and cause less disturbances to bodily metabolism; they require special apparatus and anesthetists skilled in their administration; their cost is greater than that of chloroform or ether; the time required for induction is less and the return of the patient to consciousness is much quicker than with the other anesthetics.

Ethylene and nitrous oxid differ in this regard: it is easier to maintain the desired depth of anesthesia with ethylene; the odor of ethylene is unpleasant while that of nitrous oxid is rather agreeable; ethylene is an explosive gas while nitrous oxid is not. Oxygen, which is used in the administration of both, is explosive under certain conditions, namely, if it comes in contact with oil under high pressure. This can be avoided by never using oil on the inside of the gauge or on the threads by which it is attached to the large cylinder. An extra precaution is to remove any possible oil on the threads and inside the nipple before attaching the gauge. Carbon tetrachlorid, which is nonexplosive, is excellent for this purpose. If ether is used for cleaning, enough time should be allowed for its evaporation before attaching the gauge. A nitrous oxid gauge should never be used for oxygen as it is likely to contain some oil which has been carried over in vapor form from the liquid nitrous oxid. If an explosion occurs because oil is present, the

* Read before the Section on Eye, Ear, Nose, and Throat Diseases of the Medical Society of the State of Pennsylvania, Erie Session, October 1, 1929.

only serious damage likely is the blowing out of the gauge with possible ignition of the oil. Damage to individuals may result from the glass or from the dial itself when forced out by the explosion. The writer has never heard of an explosion of the oxygen cylinder under these circumstances.

If ethylene is used for open-mouth operations, the danger of explosion is increased over its administration in other cases because the gas necessarily escapes in large quantities into the operating room, and a static spark, or a spark either from the motor of the suction apparatus, or from a loose electric connection or from a broken wire, may ignite the ethylene. If nitrous oxid is used for open-mouth operations there is no danger of explosion from the gas itself. If ether is added there is some danger but it is much less than with ethylene.

In view of the foregoing, the choice of the general anesthetics is nitrous oxid-oxygen, provided it meets with the requirements of the patient and the surgeon and there is available a suitable apparatus, with supplies, as well as a qualified anesthetist for its administration. The availability of an anesthetist qualified to administer straight nitrous oxid-oxygen is in a large measure dependent upon the attitude, in that locality, of the surgeons toward the speciality of anesthesia. The qualifications of the anesthetist are more important with nitrous oxid-oxygen anesthesia than with the other anesthetics for the reason that changes in the depth of anesthesia occur quickly, especially in open-mouth operations, in which air dilution is more difficult to guard against. The anesthetist should be so trained that he can make a diagnosis between too light and too deep anesthesia, which, strange to say, is puzzling at times because the behavior of the patient at these two extremes of anesthesia resemble each other in many respects. In other words, the anesthetist is constantly called upon to make a differential diagnosis. A medical education is desirable as a foundation because medical knowledge and experience is often of great help in safeguarding the life of the patient during the operation and in preventing postoperative complications, while the lack of this knowledge and experience may spell disaster.

Local Anesthesia.—There are a number of surgeons who are in favor of local anesthesia for their adult patients. This preference, in many instances, has no doubt been brought about because of deaths and postoperative complications connected with the unskillful administration of general anesthetics; while in other instances it has been due to the fortunate results that have been obtained in a large series of tonsillectomies performed under local anesthesia.

Deaths

Deaths occur with both general and local anesthesia but because of the reluctance on the part of the surgeons and anesthetists to publish them it is impossible to make a comparative study of the subject.

Since the large majority of general anesthetics are given by those who are not skilled in the science and art of anesthesia, it would not be surprising to find that the death rate under a general anesthesia is greater than with a local.

Deaths that occur with a general anesthetic are almost invariably due to lack of knowledge and skill on the part of the anesthetist, while those that occur under local anesthesia are likely to occur even with the most skillful anesthetist in charge. No matter how expert a surgeon may be in the use of local anesthesia he cannot be absolutely sure that he is not injecting the anesthetic directly into a blood vessel or an abscess cavity or what the reaction of the patient will be.

Dr. Snapp, of Grand Rapids, reported a death that occurred last year from the injection of 0.5 per cent solution of novocain into the tonsils in the usual manner. No cocain was used. The patient was a healthy intern who had had a molar tooth extracted under novocain anesthesia three years before without any untoward results.

Dr. Mayer has collected and reported fifty-seven deaths from local anesthesia, twenty-seven of which were for tonsillectomy.

There is this difference between local anesthesia and nitrous oxid, namely, that one has a reliable antidote if too much has been given, while the other has not. Once the local anesthetic has been injected it cannot be recalled and any alarming symptoms that may develop can only be combated by restorative measures as there is no dependable antidote.

It is possible to control the dosage of nitrous oxid and it can be quickly eliminated from the system. It has a reliable antidote and that is oxygen. Speaking more correctly, the oxygen is an antidote for the anoxemia which too marked a reduction in the oxygen percentage brings about. When deaths occur from nitrous oxid it is because of the asphyxia produced by the exclusion of oxygen and not because of any toxic or depressing effect of the anesthetic itself. If the anoxemia has accidently been carried to the point at which the patient's respirations are suspended, a few breaths of oxygen quickly forced into the lungs will correct this condition and the patient be none the worse for it.

Postoperative Complications

Local anesthesia, contrary to the belief of those who have not investigated the subject, is not free from postoperative complications.

In 1927, Dr. Lincoln Sise, of Boston, made a comparative study of the incidence of postoperative pulmonary complications covering the general surgical cases in the Middlesex Hospital for five years and in the Lahey Clinic for two years. The incidence of these complications occurred as follows: gas-oxygen, 1.8 per cent; ether, 3.1 per cent; local, 7.5 per cent. In other words, the occurrence of postoperative complications was four times greater with local anesthesia than with gas-oxygen anesthesia.

Dr. Allen Whipple, of New York, in reporting the incidence of postoperative pneumonia following the general surgical cases at the Presbyterian Hospital and at the surgical department of Columbia University for a two-year period found the ratio as follows: gas-oxygen, 1.6 per cent; ether, 2.8 per cent; local, 3.1 per cent. In this series nearly twice as many pneumonias followed local anesthesia as with gas-oxygen. The high percentage of postoperative pulmonary complications with local anesthesia in these two reports does not necessarily mean that the anesthesia itself was entirely to blame. It is very probable that local anesthesia was more frequently chosen for the poor risk patient, and no definite conclusions can be drawn from these reports.

Lung Abscess.—It is apparent from the view expressed in the literature that an increasing number of the medical profession is inclined to believe that aspiration is the cause of lung abscess, and that embolism plays only a minor rôle. According to the estimate of Moore, this complication occurs in from 2500 to 3000 tonsillectomies and that about twenty per cent follow operations under local anesthesia.

Dr. Samuel Iglauer, of Cincinnati, found in a series of fifty tonsillectomies performed under local anesthesia that blood had entered the trachea in thirty-eight per cent. Cocain was not applied in these cases in order to exclude any possible anesthesia of the pharynx and larynx. He states that these observations prove that, contrary to the general belief, blood very frequently enters the larynx and trachea in tonsillectomy under local anesthesia. Owing to the infiltration anesthesia of the fauces, laryngoscopy and upper tracheoscopy could be carried out with unusual ease in practically every patient.

May, Thoburn, and Rosenberger, in a series of twenty-five tonsillectomies performed under nitrous oxid-oxygen-ether anesthesia, found blood had been aspirated in forty-eight per cent of the cases. This was the average for two groups, in one of which deep anesthesia was used and in the other light anesthesia. There were eleven instances in the first group in which a partial Trendelenburg position was used and the anesthesia so deep that the patient did not struggle or cough or vomit during the operation. The incidence of aspiration was 54.5 per cent. In the other group there were fourteen instances in which a full Trendelenburg position was employed but the anesthesia was so light that at times the patient had to be restrained forcibly, while coughing and vomiting at intervals during the operation were the rule rather than the exception. Aspiration occurred in only 42.8 per cent of these cases, which is 11.7 per cent less than in the other group.

The Dailys, in their one hundred cases under general anesthesia, report aspiration in 78 per cent, and Myerson, 77.5 per cent in a series of two hundred cases. The writer is not informed of the depth of the anesthesia nor of the position of the patient during operation.

In making a comparison of the incidence of aspiration between the 38 per cent that occurred when local anesthesia was used by the infiltration method, and its occurrence of 42.8 per cent when a light general anesthetic was administered, we find a difference of only 4.8 per cent in favor of local anesthesia. Aspiration would probably have occurred more frequently in the cases operated under local anesthesia had a surface application of cocain been made in addition to the infiltration of novocain.

Hemorrhage.—One point often mentioned in favor of local anesthesia for tonsillectomy is the small amount of hemorrhage at the time of operation. This is rather a disadvantage because the larger blood vessels cannot be located and sutured and there is always the possibility of the clots being blown out later, followed by profuse hemorrhage. The writer has given several nitrous oxid-oxygen anesthetics for the purpose of ligating these bleeding vessels following the employment of local anesthesia.

The surgeons with whom the writer has worked during the past sixteen years formerly employed local anesthesia in a number of tonsillectomies but this practice has gradually given way to the use of nitrous oxid-oxygen, so that in recent years they will not use local unless forced to do so by the patient or family physician.

Personal Experience.—The writer has administered nitrous oxid-oxygen and nitrous oxid-ether anesthesias for tonsillectomy in approximately 16,500 cases, of which more than 6000 were straight nitrous oxid-oxygen.

There were no deaths and no lung abscesses, the only serious postoperative complication being one case of pneumonia, which occurred at the beginning of the influenza epidemic, from which the patient recovered.

The writer feels that these good results have been due to a careful study of the patient before the operation, the maintenance of light anesthesia during operation, with the head of the patient so placed that gravity will assist in keeping the blood away from the lungs, the use of a good suction apparatus and the constant observation of heart action during operation, by means of a stethoscope.

Another consideration which may not be vital but certainly is important is that of winning the confidence of the patient. This especially applies to children, for if the child has to be forcibly held during induction of the anesthesia, the impression made upon him is such that when he has grown to manhood, he may postpone a needed operation until it is too late, because of the dread of taking the anesthetic. The best place to win the confidence of the patient is in his room. There are too many things to divert the attention after his arrival in the surgical department and the latent fear comes to the surface with such force as the time of operation approaches that he is unable to concentrate on the thoughts the anesthetist is trying to get across.

In this series of over 6000 patients to whom straight nitrous oxid-oxygen was administered, the ages varied from one year to eighty years. There is this difference in the behavior of a young child, say under three years of age, and of older children and adults, if the nitrous oxid has been accidentally pushed too far, namely, the young child's muscles will be thrown into jactitation, and the twitching may continue for a minute or more after oxygen has been restored to the blood and the patient's color is pink. This may also occur in older children, but rarely occurs in adults. The writer has had possibly six or seven cases in which jactitation occurred, and although no harm resulted to the patient, yet the multiple twitching of muscles, especially those of the face, is not pleasant to observe. For this reason, the writer prefers to avoid this condition by increasing the percentage of oxygen and adding a trace of ether; however, he does not hesitate to give straight nitrous oxid-oxygen to a child of any age if ether is contraindicated.

Cough Reflex.—The preservation of the patient's cough reflex is very important in preventing postoperative complications. If the surgeon demands a throat that is continuously and thoroughly relaxed, ether must be added to the gases in the majority of cases as the relaxation is likely to be more or less intermittent when straight nitrous oxid is used and occasionally absent altogether. It is possible to keep the throat relaxed by adding ether and yet not abolish the laryngeal and tracheal reflexes for the reason that the pharyngeal reflexes disappear first. The margin between the disappearance of these reflexes, however, is small and the more skilled the anesthetist the less danger there is of anesthetizing these important protectors of the lungs.

When a patient coughs, it is better to lighten the anesthetic so that he can more easily cough up the foreign matter that has entered the larynx or trachea. This is an interruption that the surgeon may not welcome but it is in the interest of the patient.

Morphin.—If morphin is given before operation it should not be so great as to abolish the tracheal or the laryngeal reflexes. For the adult patient the writer considers one-fourth grain the maximum dose. The majority of the patients, on whom tonsillectomies were performed under straight nitrous oxid-oxygen, received no preliminary narcotic.

Poor Risk Patients.—There were many poor surgical risks in this series of cases, including those with nephritis, pulmonary tuberculosis, myocarditis, status lymphaticus, and diabetes.

The writer will not go into the details of technic or into the physiology of nitrous oxid, but if any one wishes to pursue the subject, an article of the writer's can be found in the March, 1929, issue of the *Annals of Otology, Rhinology and Laryngology.*

Conclusions

1. In a series of approximately 16,500 tonsillectomies under nitrous oxid-oxygen alone or with a low percentage of ether added, there were no deaths, no lung abscesses, or other serious postoperative complications, with the exception of one case of pneumonia, with recovery.

2. The preservation of the laryngeal and tracheal reflexes, with the head of the patient so placed that gravity assists in keeping the blood away from the lungs, was probably a factor in preventing postoperative complications.

3. An examination of the patient before operation, with the postponement of the operation in many cases due to colds, bronchitis, hyperthyroidism, acidosis, and suspected tuberculosis has no doubt been instrumental in reducing the postoperative morbidity.

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ABSTRACT OF DISCUSSION

C. M. Brown, M.D. (Buffalo, N. Y.): Since the prime object is the safety of the patient, this subject has been covered completely from the standpoint of the anesthetist and the surgeon.

Gas-oxygen anesthesia is applicable to a greater variety of cases than ony other one anesthetic. It is

suitable both for children and adults; it can be used in nearly all heart lesion cases and, if we exclude cases of beginning coryza, we feel that it is followed by fewer lung complications than any other anesthetic. Patients who have the beginning of a cold, and those in whom a temperature of 100°F. is recorded, no operation is made to remove tonsils and adenoids. Every chest is examined immediately before operation, and if râles are present, operation is refused.

By gas-oxygen anesthesia is not meant any admixture of ether. Gas-oxygen anesthesia, in my opinion, requires more skill than any other form of anesthesia and should not be attempted unless under the supervision of a skilled gas-oxygen operator. It is not the anesthetic for a novice.

The use of the stethoscope over the precordium should be constant throughout the anesthesia, and in borderline cases a blood-pressure apparatus should be in position and frequent observations made.

It requires one who is really alert to give gas-oxygen anesthesia. The only operative case I ever lost on the table (a mastoid case) would have been prevented if a stethoscope had been used.

We should appreciate the detrimental effect of fear in the taking of an anesthetic. The confidence of the patient, even a small child, is greatly enhanced if the anesthetist sees the patient, examines him, becomes acquainted with him, and explains what is to be done. Dr. Evans does all these things. Formerly it was felt to be a waste of time, but now it is known that the induction is quickened enough to make up for any time lost in the visit to the patient's room.

There are some important points in favor of gas-oxygen anesthesia over local in tonsillectomy. It used to be that patients with any heart complications were believed suitable for local anesthesia only, and that in cases of an imperative tonsillectomy in which there were healed tuberculous lesions it was the anesthetic of choice. But with a series of approximately 6000 patients, many of whom had either old healed tuberculosis or some kind of heart lesion, and with no fatalities and no lung abscess or pneumonia following, I am constrained to feel that straight gas-oxygen anesthesia is better, and if better for these, why not also for the average case? Not all the fatalities from local anesthesia are published, but they are numerous even in the literature. The slopping over of the local anesthetic and the abolishing of the throat reflexes is a condition that happens too frequently and is a danger point that should not be looked upon lightly. In straight gas-oxygen anesthesia, we do not abolish the throat reflexes, and our lack of lung complications and fatalities is largely due to the position of the patient's head, which is kept lower than the rest of the body during the operation.

Very few of our patients are given a preliminary hypodermic, since that may help to deaden the safety reflexes. The few who receive hypodermics are known alcoholics or heavy smokers. Ether is certainly the safest anesthetic in the hands of the inexperienced, but it carries a trail of complications the least of which is not the patient's abhorrence of its induction and after effects. Most persons dread the anesthetic more than the operation, but one experience with gas-oxygen does away with this dread and is usually a happy rather than an unpleasant experience. The promptness of recovery to complete consciousness and the lessened nausea, unless blood has been swallowed, help to make the patient look back upon the experience with less horror and upon any further operations with less dread.

The continuous inhalation of ether in open-mouth operations and its detrimental effect upon the surgeon's health should also be thought of in connection with ether anesthesia. Chloroform is not a safe anesthetic, especially for tonsillectomy, and more especially if status lymphaticus or heart lesions exist.

There have been many slight disadvantages in gas-oxygen anesthesia, most of which have been overcome. The throat that is not completely relaxed increases the difficulty of the operation. A little patience, a little adjusting of the technic, will overcome this difficulty. At first we had much trouble with the blowing of blood and coughing into the surgeon's face and in his mirror, but with the complete control of bleeding after the removal of the first tonsil this spattering has been largely overcome.

If the patient's head is lowered, gravity will keep the blood from passing below the midpharynx. The surgeon should be the judge of how low the patient's head is placed. If it is too low it means stress on the anterior pillars, and makes the tonsillectomy difficult. The head should not be lowered to a point at which any tension is brought upon these pillars. The point of flexion is really important and should be at the nape of the neck. There is slightly more bleeding at the time of removal of a tonsil under gas, but this may be more apparent than real because of the blowing of the gases under high pressure. It is certain, that with the lessened nausea following operation, there are fewer cases of postoperative bleeding. A first-class performing suction apparatus is an important adjunct to gas-oxygen anesthesia, for with the pressure of the blowing gases, the throat must be kept more dry than with ether or chloroform.

The distinct advantages of gas-oxygen anesthesia are: (1) Safety of the patient. (2) Prompt operation with saving of time. With one anesthetist and one operating room, a surgeon can easily average three adults or four children to the hour, which includes anesthesia, tonsillectomy, and ligation of necessary vessels, and the preparation of the room between the arrival of patients. (3) Prompt recovery of consciousness. Most of our patients transfer themselves from the table to the cot when they are told to do so. (4) Not the least important is the patient's attitude toward future operations because of the pleasant experience with gas-oxygen anesthesia.

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*Relation of Focal Infection to Systemic Diseases**

RELATIONSHIP OF FOCAL INFECTION TO CARDIOVASCULAR DISEASE

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In considering focal infection, we have particular reference to the tonsils, teeth, and upper air passages, since these are the most frequent sources. Often they present no symptoms.

It is scarcely possible to distinguish their relative importance as sources of infection. The tonsils have received a major portion of atten-

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tion. This is partly because dental infection is a less striking phenomenon during the most important period of incidence of rheumatic fever, i.e., childhood. Dental infection is considered to comprise apical abscesses, devitalized teeth, pulpless teeth, and teeth with inflamed pulps.

From the standpoint of constitutional disturbance, sinuses seem of lesser significance. Wood states that while toxins may be absorbed from the nasal sinuses so as to produce symptoms, the absorption of bacteria, their dissemination into the circulation, and the production of secondary infection is not a frequent occurrence. This lack of absorption is probably because the sinus mucosa is not vascular and a complete blocking of sinus drainage is rare.

In the relationship of focal infection to cardiovascular disease, we have particular reference to rheumatic heart disease. It is pertinent, therefore, to discuss the nature of rheumatic infection, to inquire to what extent focal infection is related to rheumatic heart disease and in what way rheumatic heart disease may be influenced by its removal.

Rheumatic infection is the most important cause of heart disease in the early years of life, particularly before the age of twenty-five years and with a specially high incidence in the ages from five to fifteen years. While in itself it is not so important a cause of death as any one of the common infections of childhood, heart disease caused by rheumatic infection occasions twice as many deaths as scarlet fever, half as many deaths as diphtheria, and almost as many deaths as measles and whooping-cough.

Clinically, rheumatic infection presents a variety of manifestations, which may be roughly grouped as severe and low grade. The severe form is characterized by high fever, drenching sweats, and polyarthritis. The low-grade form, often difficult of recognition on account of its resemblance to other diseases, may show itself with one or more of the following symptoms: slight fever, chorea, subcutaneous nodules, so-called growing pains, accelerated pulse, leukocytosis, enlargement of the superficial lymphatic glands, loss of weight or failure to gain weight, secondary anemia, and recurrent attacks of tonsillitis. The severe manifestations of rheumatic infection are prone to occur in adults and their course is relatively brief, with heart involvement in not more than fifty per cent of the cases. The low grade protean symptoms occur more frequently in children, in whom they tend to prolong themselves for weeks and months, and are attended by cardiac involvement in seventy-eight per cent of the cases. It is likely, as Swift has indicated, that nephritis, pulmonary lesions, pleurisy, and abdominal pain may represent special visceral manifestations of rheumatism. In a patient who died during an acute attack, almost identical lesions were described in the arterioles of the pericardium and of the kidney. It has been suggested that an attack of nephritis may represent the analogue of rheumatic polyarthritis. Attention has also been called to endothelial changes in the lung capillaries which are similar to rheumatic lesions elsewhere. Such lesions have occurred in the pleura and suggested the possibility of tuberculosis. Abdominal symptoms which sometimes appear may be caused by rheumatic lesions in the mesenteric vessels.

It appears then that the symptoms of rheumatic infection are variable, particularly in the young, and that the lesions are widespread, not being confined to the tonsils, the articulations, nor the heart. For these reasons, as well as for its chronicity and for its tendency to recur, rheumatic infection has been likened to syphilis and to tuberculosis. The clinical difference between rheumatism in children and in adults points to the probability of an immunity reaction, which is poor in childhood but tends to increase as the patient grows older. It is possible also that, like tuberculosis, rheumatic infection may be mild, severe, arrested, or recurrent. A recurrence may take place within a year of the initial attack, or it may be four years or more before it appears. Therefore a patient once infected cannot be considered cured until a period of at least five years has elapsed. Absence of symptoms in the meantime may be misleading if regarded too optimistically. The younger the patient at the time of the initial illness, the greater is the likelihood of renewed attacks. While a child may pass through an attack of rheumatic fever without cardiac damage, it is impossible to be certain about this until several years have elapsed. Mitral stenosis has been reported to develop five and one-half years after an attack of rheumatic fever without any signs of illness in the meantime. Also, Aschoff bodies have been found in the heart musculature at autopsy several years after an attack of rheumatic fever without recurrences in the interim. This indicates that the infection may be slowly progressing although clinically the disease appears inactive.

The incidence of rheumatic infection is favored by poor living conditions, insufficient food, and lack of fresh air and proper hygiene. Thus it occurs more frequently among poor children than among those who are well cared for. That it is communicable has been proved by various ward and camp epidemics that have been re-

ported. In some of these epidemics it was noted that only rheumatic children were attacked, and that nonrheumatic children were not affected.

Etiology

It is generally believed that streptococci have some casual relation to rheumatic infection. So far, however, no single strain has been satisfactorily established as the sole cause. Streptococci are encountered so frequently and in so many locations that it is difficult to show their relationship to any one disease with the exception of subacute bacterial endocarditis. Here their etiologic relation has been definitely proved. Various strains have been reported at different times as the cause of rheumatic infection, but none of them has been proved. Perhaps several strains may bear a causal relationship. Swift and his associates have shown that by injecting nonhemolytic streptococci of various strains into rabbits an allergic condition is produced similar to that in animals inoculated with tubercle bacilli. When these rabbits receive subsequent inoculations of very small amounts of streptococci, they show a marked skin reaction. This condition, however, is not specific for any one particular strain of streptococci. Swift believes, in consequence, that a focal infection instead of being a point from which virus is disseminated through the body, acts as an area in which a substance is produced which sensitizes the tissues. If these tissues contain organisms, or virus, a reaction of an allergic type will occur. Therefore, the state of the tissues is considered as the characteristic feature of the disease and minor importance is allotted to the specificity of the streptococci. It would appear that a variety of strains, such as the streptococcus rheumaticus of Poynton and Payne, the streptococcus cardioarthritidis of Small, the anhemolytic streptococcus of Birkhaug, and the various types described by Rosenow may all have been inciting agents in rheumatic infection.

It has been found that intravenous injections in rabbits have altered a hypersensitive state to a state of lower sensitiveness or immunity. Swift has treated patients with intravenous injections of small doses of streptococcus vaccine or nucleoproteins and as a result has observed a diminishing febrile response and at times a diminishing cutaneous reaction. In many patients, there has been clinical improvement. The nature of this clinical improvement, however, is necessarily difficult to estimate since it may be spontaneous. Besides, long periods of observation are necessary to assure the success of such treatment, in order to rule out the possibility of recurrences. This may be a matter of several years. Small reports favorable clinical results from the injection of antisera and soluble antigens made from the streptococcus described by him.

Relationship of Foci of Infection to Rheumatic Fever

Rheumatic fever is frequently associated with focal infection, particularly attacks of tonsillitis, but to establish a causal relationship between the two is difficult since there are many cases of tonsillitis which do not develop into rheumatic infection. Mackie found that focal infection occurred in sixty per cent of four hundred nonrheumatic children and in eighty per cent of rheumatic children. All one can deduce from this is that focal infection is more frequent in rheumatic patients than in nonrheumatic. On the other hand, many cases of rheumatic fever are not accompanied by demonstrable focal infection. It seems certain that sore throat will not set up rheumatic fever in a previously nonrheumatic child. In the tropics, sore throats are common, yet it is reported that there is no rheumatic fever. That tonsillitis is a frequent accompaniment of other definitely rheumatic features, that diseased tonsils are more frequent in rheumatics than in other subjects, and that attacks of tonsillitis often accompany or usher in relapses is undoubted. Unfortunately the removal of the tonsils may also be followed immediately by rheumatic symptoms. Allan reports seventy to eighty-five per cent of these patients relapsed after tonsillectomy, especially if the initial attack appeared in early life. Kaiser, in a survey of four hundred and twenty-nine children, found that nonrheumatic children whose tonsils were removed developed only about half as many cases of rheumatism as those in whom the tonsils were present. He also found that rheumatic children, whose tonsils were removed, developed ten per cent less recurrence than those in whom a tonsillectomy had not been done. His results suggest that while tonsillectomy neither prevents an initial attack nor adequately protects against recurrence, it greatly reduces the incidence of rheumatism and to some degree at least cuts down the number of recurrences. While benefit seems to be derived in some cases by enucleation of the tonsils, this may not be a very striking evidence of cause and effect. There is no doubt for example that many diseases are benefited by the removal of infected tonsils or other septic foci. Furthermore, even if the tonsils and other foci of infection are removed, inflammation may still appear elsewhere in the nasopharynx and usher in new

attacks. It follows that the hope of improving rheumatic heart disease by the eradication of focal infection is uncertain. The best results are to be obtained before the incidence of heart involvement or rather before the incidence of rheumatic infection. In view of the widespread lesions of rheumatism, it is evident that carditis is only one of its manifestations and therefore attention should be focused on the systemic condition rather than on the heart alone. There is, of course, no question of the wisdom in eliminating focal infection, if present, regardless of its etiologic relations. We are simply emphasizing at this time a question of direct cause and effect. There is no doubt of the systemic improvement which sometimes strikingly appears after the treatment of focal infection. The following is a case in point.

M. E., a girl of 9 years, had her first attack of rheumatic fever with polyarthritis in March, 1926. When first seen, July, 1926, she was undernourished and weighed 52 pounds. The tonsils were large and diseased and there was an infected molar tooth. The heart was markedly enlarged to the left and presented a pronounced, double, mitral lesion. The heart rate was 116; and the blood pressure, 90/60. The hemoglobin was 76 per cent. She was put to bed at home and given medical care, but, for a number of reasons, nothing was done about eradicating the focal infection. When seen one year later, April, 1927, she was no worse, but she had not improved. In April, 1927, a tonsillectomy was performed under ether and the abscessed molar tooth removed a little later. Almost immediately after, a marked improvement in her condition took place. She started at once to gain weight, her color improved and by the spring of 1929 she weighed 86 pounds, and her hemoglobin had risen to 85 per cent. There was no alteration, however, in the physical signs. In May, 1929, she sustained a second attack of rheumatic fever. The temperature was not high; there were joint pains which were not extreme. Her illness continued for six weeks, however. The face grew puffy; the urine showed a cloud of albumin; the heart rate rose to 128; and, at the end of six weeks, she died suddenly of myocardial insufficiency.

Here the effect of treating focal infection was striking for two years without, however, preventing a fatal recurrence at the end of that period.

Treatment

If we bear in mind that rheumatic infection in the heart as elsewhere in the body may be progressive although clinically inactive, a child who has had an attack of rheumatic fever with or without cardiac involvement should be carefully watched for any signs of indisposition, and if on the appearance of such signs the temperature is elevated, it should be put to bed and allowed to remain there until the temperature has returned to normal. The frequent use of a clinical thermometer seems at least as important as restriction of the patient's activity. Focal infection, if present, should be eradicated when, and if, the patient's condition permits, regardless of the question of cause and effect. From the standpoint of preventing rheumatic heart disease, the most favorable time for removing such infection is before rheumatism has had an opportunity to appear. This means the careful routine examination of all individuals and particularly of children below the age of five. Even then, we should be awake to the fact that lesions in the upper air passages which cannot be removed nor successfully treated may still remain to afford entrance to the invading organisms.

A most important factor in treatment is prolonged convalescence for the victims of rheumatic infection, even if the heart has not been manifestly involved, in favorable surroundings in which they may obtain an abundance of fresh air, good food, frequent examinations, and supervision of their activities. This can be best accomplished in convalescent homes or sanatoria. The period of such convalescence should be at least twelve months. It is becoming increasingly evident that prolonged convalescent treatment of rheumatic infection instituted early is as essential for recovery from this disease and from the circulatory disability which it entails, as from tuberculosis. The establishment of such institutions will, before long, be one of the active problems of every community.

Conclusion

1. An attempt has been made to show that the relationship of focal infection to rheumatic heart disease is not clear and that the heart represents only one of the tissues of the body involved in the course of such disease. The removal of focal infection does not prevent the incidence of rheumatic fever nor prevent its recurrence. It does, however, lessen the possibility of both. It should preferably be done before rheumatic disease has had an opportunity to appear, and this involves the routine examination of all apparently healthy patients for foci of infection. Structural changes may be prevented but cannot be returned to normal by the elimination of focal infection.

2. The elimination of focal infection in any case is a wise and useful measure and should be performed regardless of etiologic relationships. At the same time one should keep one's mind open to the limitations and the benefits of such treatment and not think too exclusively in terms of heart or tonsils.

3. Greater attention should be paid to prolonged convalescent treatment and to the necessity of establishing facilities for such treatment with the purpose of building up the patient's resistance against the rheumatic virus.

4. Attention has been directed also to the possibility of artificially building up the patient's immunity by the injection of antisera and bacterial products. This is a problem, however, which demands additional investigation.

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RELATION OF FOCAL INFECTION TO GASTRO-INTESTINAL DISEASES

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Since Hippocrates "cured" a rheumatic patient by extracting a tooth, interest in focal infection has been intermittently, more or less, in the foreground. When it is recalled that approximately seventy per cent of the patients consulting the general practitioner present complaints referable to the digestive system, the relationship between distant foci of infection and gastro-enterologic ailments, probably more than any other angle of the focal infection problem, merits dispassionate discussion and consideration. Especially is this true now, in an era when, in some quarters, the enthusiasm for rather radical dental extraction and sundry forms of tonsil eradication is rampant. Because of necessary limitations, it will be obviously impossible to include but a few of the inflammatory lesions encountered in the alimentary tract; consideration will be arbitrarily limited, therefore, to peptic ulcer and ulcerative colitis.

Willius has very aptly said that the general use of the term, myocarditis, has been a medical catastrophe, permitting the physician to classify any and all diseases of the cardiovascular system under a term that is vague and inadequate. The same statement might justly be applied to the term, colitis, since it is, when used as a complete diagnosis, quite meaningless. Of the various colitises, the type known as chronic ulcerative colitis is the one most under discussion today, especially in regard to its etiology, which was unknown, at least very uncertain, prior to the publication of Bargen's work in 1924. Since that time, however, it is Bargen's belief, shared by many investigators and denied by others, that the disease has a specific causative organism, the diplococcus of Bargen, a fact that has been much discussed.

Early in his investigations, Bargen injected nine rabbits with cultures of the diplococcus isolated from the colon of a patient with ulcerative colitis. All were dead in five days and eight of the animals presented definite ulcerative lesions in the colon, three of them having, in addition, empyema of the gall bladder from which a pure culture of the diplococcus was obtained. The organisms isolated from the pus in the gall bladder of the rabbits with lesions in the colon, when injected into dogs produced colonic lesions closely resembling those seen in patients with ulcerative colitis. Later, a patient with a four-year history of ulcerative colitis presented a periapical abscess in a devitalized tooth. The tooth was aseptically extracted, the pus from the abscess cultured and subcultured twelve hours later, and, after six hours, injected intravenously into a rabbit. In twenty-four hours the rabbit was dead, with massive lesions in the colon. A pure culture of the lancet-shaped diplococcus was recovered from the mesenteric lymph glands, a culture of which was reinjected intravenously into a dog. Three hours later, the dog began to pass bloody mucus, and the next day, was dead. In neither the dog nor the rabbit did necropsy reveal the existence of any other lesion, apart from those in the colon. The localization of the infection from the devitalized tooth, in the colon of the rabbit, and the subsequent localization in the colon of the dog, to the exclusion of all other viscera, seems significant. This first suggested the possibility that distant foci in patients themselves might play a significant part in the production of ulcerative colitis, or at least in their exacerbations. More recently, cultures of the organism were obtained from the infected roots of teeth and from dental granulomas in patients suffering from ulcerative colitis. Eighteen-hour cultures were injected intravenously into rabbits and in a large percentage of the animals the lower part of the colon showed hemorrhagic infiltration. In these hemorrhagic areas, the diplococcus was again found. Diplococci taken from these sources were introduced into the devitalized root canals of the teeth of dogs. Seven months later the first dog manifested rather typical ulcerative colitis symptoms and at autopsy showed definite hyperemia of the lower portion of the colon. The second dog passed considerable amounts of blood and mucus by bowel ten to twelve times a day and necropsy revealed multiple small ulcers and hyperemia throughout the lower portion of the colon. When cultures from the infected teeth of these dogs were injected intravenously into rabbits, a hemorrhagic condition was produced in the lower colon from which the diplococcus was again isolated. This was also repeated with cultures obtained by the proctoscope from the colons of dogs and injected into rabbits.

By many observers it has been noted that symptoms have often been ushered in by an

acute upper respiratory infection or soon after some dental infection. Not infrequently, patients with ulcerative colitis have exhibited repeated severe bowel reactions with acute bloody dysentery following the extraction of infected teeth and tonsils. It has been further observed that the removal of such foci often caused remarkable improvement in the symptoms of chronic ulcerative colitis. Without other therapy, the clinical findings have markedly improved and such improvement is associated with appropriate proctoscopic and roentgenologic trend toward normal.

Although the use of a specific vaccine seems in the vast majority of diseases to be quite disappointing as a mode of therapy, yet in ulcerative colitis, in many cases, it has brought tangible results in improvement that far exceed those obtained by any other form of treatment. In view, therefore, of the experimental evidence submitted, the clinical reactions, and the clinical improvement when foci are removed, and the rather good results emanating from the use of vaccine prepared from the diplococcus of Bargen, the significance of distant foci of infection in relation to the etiology, at least, of chronic ulcerative colitis, cannot be overrated. How important they may be in its continuation, it is difficult to say, but their part in the early stages seems established.

Peptic Ulcer

In the category of peptic ulcer, is included duodenal, gastric, and gastrojejunal ulcers. While duodenal and gastric ulcers are clinically separate and distinct entities, they are, usually, considered together, etiologically. The cause, or causes, is not known. Numerous theories and hypotheses have been advanced to explain the origin of ulcers, but their very multiplicity demonstrates that there must be several etiologic factors concerned, no one of which can be exclusively incriminated. Let us, however, make a brief survey to see how much importance has been attached to the possible etiologic factor of focal infection and the relative importance of such data as compared with other opinions.

Cohnheim divides the question of the origin of the ulcer into a consideration of the cause of the original defect and the cause of the chronicity, but it is questionable whether the chronicity involves principles different from those involved in the original defect. Rokitansky and Virchow believed that ulcers are the same issue of the combined action of localized vascular disturbance (spasm) with local nutritional changes (ischemia) and the subsequent digestive action of the gastric secretion on the devitalized tissues. Aschoff stresses the theory of Cohnheim and speaks of the erosions as caused by spastic conditions of the gastric channel (lesser curvature) itself or to blocking of an arteriole caused by a spastic, embolic, or arteriosclerotic factor.

The most frequent site of peptic ulcer is in the duodenum, in the ratio of 7:1. It thus occurs in an area which, though bathed in an alkaline medium is, however, exposed to an acid medium and to considerable force during the passage of food from the stomach. Mann and Williamson[1] preface their report on the experimental production of ulcer by saying that "the most important and almost the only uncontradicted fact with regard to peptic ulcer, is its anatomic and physiologic location." These absolutely typical ulcers occur only in that portion of the gastro-intestinal tract which can be exposed to the action of a mineral acid. Efforts constantly to expose the gastroduodenal mucosa to an acid medium by administering acid orally having failed, Mann believed that such exposure might be accomplished by eliminating the secretion poured into the duodenum which tends to neutralize the acid not previously neutralized in the stomach. His procedure was, therefore, directed toward injuring or destroying the alkaline mechanism. This was done by sectioning the pylorus with closure of the duodenal end, section of the first portion of the jejunum, end-to-end anastomosis of the distal end to the stomach, and of the proximal end of the jejunum to the ileum. Peptic ulcer developed in almost every animal that survived two weeks postoperatively. The ulcers so produced would not heal spontaneously, but could be made to heal, readily, when protected from the gastric juice by gastro-enterostomy or by draining the contents of the duodenum back over them. Mann and Williamson also stressed that the chronicity of ulcers was due to new cells, formed in the process of healing, being swept away by the passage of gastric contents before they had an opportunity to establish themselves as an integral part of the tissue. This, therefore, stresses the importance of the chemical and mechanical factors first suggested by Cohnheim. It will be seen then that none of the investigators considered focal infection as the chief cause of peptic ulcer, although in Mann and Williamson's experimental ulcers, Rosenow did find streptococci.

Concerning the focal infection theory, the outstanding work in the production of ulcer by the elective localization of bacteria from distant foci has been that of Rosenow and his associates. Before it could be accepted that the usual

ulcer of the stomach and duodenum in man is due commonly to a local hematogenous streptococcus infection, it was necessary to show, first, that in this type of ulcer these organisms are commonly present to the exclusion of other bacteria and, second, that the streptococci isolated from the ulcer wall as well as those from distant foci of infection in patients having ulcer, produce, when injected into animals under otherwise normal conditions, ulcers of the stomach and duodenum resembling those in man. These conditions Rosenow considered fulfilled by isolation of streptococci from the base of the ulcers and injection thereof into animals, arriving at the conclusion that the usual ulcer of the stomach and duodenum in man is, primarily, due to a localized hematogenous infection of the mucous membrane by streptococci. The streptococcus of ulcer produces within its substance a poison which selectively injures the mucous membrane of the stomach with the production of hemorrhages, leukocytic infiltration and ulcer. The presence of this specific streptococcus in the ulcers in dogs, produced by the methods of Mann and Williamson, its elective localizing power in intravenous injection, and its ability to produce this poison in vitro, Rosenow feels, indicate that it is not a secondary invader but that it plays an important part in the production of these ulcers. Holman, however, believes that the presence of the streptococci in the ulcers produced by Mann and Williamson rather stresses the secondary nature of such an invasion and that it is important to consider the tendency of infection to localize in an area whose resistance is lowered. That hemorrhagic and inflammatory lesions of the stomach and duodenum are produced by the methods of Rosenow is readily accepted. Mann and Williamson point out that acute gastric or duodenal ulcers may be produced experimentally with relative ease and the methods employed to produce them successfully are numerous. But whether the lesions thus experimentally produced are, etiologically, clinically, and pathologically, the same as the chronic peptic ulcers encountered in man, there seems to be considerable discussion. In any event, Mann and Williamson maintain that those ulcers produced by eliminating the alkaline medium more closely resemble, histopathologically, those seen in the human than the ones produced by other experimental methods.

How large a rôle focal infection plays in the usual chronic indurated or calloused ulcer in the human seems, therefore, indeterminate, many factors being involved in the etiology of peptic ulcer as we see it today. The neurogenic, the focal infection, the mechanical, and the acid factors, therefore, have been discussed in detail, in order that a proper perspective might be obtained and the relative importance of these very important factors be more clearly set forth. Eusterman[2] combines the various factors in his theory when he says: "An imbalance of the parasympathetic nervous system provoking physiologic dysfunction, particularly regional spasm, combined with the irritant action of the hydrochloric acid, is the important factor in the production of ulcer." He points out, however, that there are other factors necessary, because such imbalance is seen in many individuals who do not develop ulcer.

The importance of focal infection as an etiologic agent, at least in duodenal ulcer, is somewhat minimized furthermore by considering the history of the disease. It is apparently a relatively new disease; at any rate we can safely say that it has become vastly more common in the twentieth century than it was previously. Virchow, in his *Archives,* gave his views on the etiology of gastric ulcer but nowhere in his writings does he mention ulcer of the duodenum. Brinton, in 1856, in reviewing the results of 7226 autopsies from the standpoint of ulcers of the stomach, concluded that they occurred in five per cent of all persons, dismissing duodenal ulcer with little more than casual mention. In 1891, Oppenheimer reaffirmed the view that duodenal ulcer was much rarer than gastric. In 1900, the first operation for duodenal ulcer at the Mayo Clinic was performed, and in 1905, W. J. Mayo reporting a series of two hundred and twenty-six cases of duodenal ulcer was told by one of his auditors that he had never seen such a thing in the living or dead body. In 1923, Gruber and Kratzeisen reviewing three thousand postmortems found 120 gastric ulcers and 64 duodenal ulcers and gave as their opinion that duodenal ulcer was increasing in frequency. In 1925, Hargis, in an anatomic study of duodenal ulcer, reported on a complete examination of the gastro-intestinal tract in a series of 2000 autopsies performed at the Mayo Clinic, from 1920 to 1924. Evidences of gastric ulcer were found in 7.05 per cent, and of duodenal ulcer in 11.85 per cent. Thus we see that the incidence of duodenal ulcer is increasing rapidly, this increase beginning, apparently, about 1900. This would bring to the fore the factor that "there is an evolution in disease as in other characters that affect the human body." It would obviously seem unwise to hold focal infection alone responsible. Furthermore, to account for the occurrence of peptic ulcer in the nervous, high-strung type of person, in the patient constitutionally inferior with nervous

imbalance, and in those of careless dietetic habits, we must have much more than the influence of focal infection. Hench has suggested that we may have to reinterpret the implied meaning of focal infection in order to harmonize the many conflicting views on the subject; that focal infection may have to be defined as meaning not necessarily secondary metastatic implantation of the actual organisms themselves but as meaning, with or without bacterial metastasis, the systemic effect of toxins perhaps alone liberated from infectious foci, as for example, a diphtheritic focus. Or we may have to consider focal infection not from the point of view (a) of the secondary bacterial metastasis, the common point of view, or (b) from the standpoint of toxin liberation, i.e., toxin-antitoxin response, but from the point of view of focal toxin and subsequent hypersensitivity, i.e., an allergic response, as recently stressed by Freiberg in his work on arthritis, that a joint sensitization may occur as a local manifestation of sensitization, or allergy, in this particular work, from intestinal foci of infection. As with joints, therefore, is it not possible that foci of infection may produce a state of sensitization in localized areas of the alimentary tract and so render these particular areas more susceptible to invasion by organisms acting in the secondary rôle that Holman ascribes to them? This, however, is conjectural and speculative.

It can scarcely be denied that focal infection plays a more or less important rôle in the life cycle of gastroduodenal ulcers but that it plays "the dominant part in the initial phase has certainly not been proved." Holman feels that infection frequently follows the many predisposing causes that exist but that if progress is to be made in the appreciation of bacterial infections, the underlying condition, making possible the infection and the advance of infection, must be emphasized, as has been done in tuberculosis and in other diseases.

"In the pathogenesis of ulcer, the clinician would postulate a type of individual or soil, as a constant, and, as variables, infection and spasm, the latter and all that it implies resulting from imbalance of the vegetative nervous system....and in the majority of cases the formation of ulcer in man would presuppose a certain type or physiological constant plus these variables, singly or in combination."[3]

In fine, in ulcerative colitis, we may well lend diligent attention, primarily, to matters of infectious foci, believing that a very potent rôle is played by them in the etiology of the disease. In gastroduodenal ulcer, we shall continue to stress, first of all, the necessity for eliminating the acid medium and concurrently eliminating the mechanical injury that may be done to the ulcerated area. Secondarily, but none the less surely, attention may be directed to eliminating infectious foci. We can readily give symptomatic and often permanent relief from peptic ulcer by the first procedure. We have, as yet, however, been unable consistently to produce definite symptomatic response by attention to foci, alone.

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RELATION OF CHRONIC PARANASAL SINUS INFECTION TO BRONCHOPULMONARY DISEASE*

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Paranasal sinus infection plays an important part in infections of other portions of the respiratory tract. Direct extension of infection from one part of the tract to another occurs easily and frequently. In some situations, especially in the sinuses, it is difficult to clear up an infection without special measures. The infection, therefore, tends to become chronic in the sinuses, and will act as a continuing focus for reinfection of the rest of the respiratory organs. The writer, therefore, wishes to call attention to a few points concerning the relation of chronic paranasal sinus infection to bronchopulmonary disease.

In the first place, how frequent is chronic sinus infection? Recently at the University Hospital, Schenck and the writer were interested in this question. Figures on the incidence of sinus disease in two hundred asthmatics had been obtained and it was desired to compare these with figures for persons not affected with obvious respiratory disease. Not finding any data on the subject in the literature, a study was made, clinically and by the x-ray, of a group of fifty individuals who gave no history of recent respiratory disease, no history of susceptibility to colds, no history of frank sinus disease in the past, and whose ages fell proportionately into the same decades as those of our asthmatics. A group so selected may well be considered better than any average group of fifty individuals. Yet thirty-six (seventy-three per cent)

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gave x-ray evidence, and thirteen (twenty-six per cent) gave clinical evidence of sinus abnormality. Now this does not imply that seventy-two per cent of the people in Pennsylvania have active sinus disease, but it is probable that that many have had, at one time or another, sufficient sinus disease to produce permanent abnormal x-ray findings. Sinus disease is undoubtedly very frequent in this part of the country. If, now, chronic sinus disease also plays a part in the etiology of other diseases of the respiratory tract, it is at once evident how important sinus disease becomes in the study and treatment of such other respiratory conditions.

Chronic sinusitis undoubtedly can cause recurring colds. The infection lies dormant until the individual's resistance is temporarily lowered by some factor such as fatigue, exposure, or loss of sleep. Then it flares up and promptly seeds the congested mucosa of the nasopharynx with a new infection that readily enough goes farther into the tracheobronchial tree. This process, often repeated, will in time produce a chronic bronchitis. In some individuals, perhaps more especially those with an allergic background, an asthmatic bronchitis may result. In others, the continued bronchial infection and the chronic cough may lead to structural changes and bronchiectasis may develop.

Chronic sinusitis may be caused by infection lower in the respiratory tract. Purulent bronchial secretion occurs in a number of conditions, such as lung abscess, bronchiectasis, at times in bronchial asthma, or in ulcerative pulmonary tuberculosis with mixed infection. The repeated spraying of the nasal chambers by coughed-up pus may in time produce a chronic sinus infection. Once started, this sinus infection will tend to perpetuate the bronchopulmonary condition which first caused the sinus disease. The following data will lend support to these claims.

In bronchial asthma, Schenck and the writer found an incidence of sinus abnormality in 80.5 per cent by x-ray examination and in 67 per cent by clinical examination in a series of 200 asthmatics. One can, therefore, safely say that in every asthmatic the chances are at least two out of three that chronic sinus disease is present. There is abundant clinical evidence that, whatever other etiologic factors may be present in a given case, the patient will probably not achieve complete relief from his asthma if the sinus disease is not satisfactorily treated.

Sinus disease in bronchiectasis, while a recognized factor, has not received the attention it deserves. The following figures are significant: of twenty-one patients with bronchiectasis, seen in the wards of the University Hospital, sixteen (76.2 per cent) gave clinical evidence of sinus disease, and in every one the x-ray showed sinus abnormality, an x-ray incidence of 100 per cent. Moreover, the degree of sinus involvement per patient is greater in bronchiectasis than in any other condition. In nine of our twenty-one patients, all the sinuses were involved: a pansinusitis. If each main sinus or sinus group be counted as one, and if, for example, a patient had both antra, both frontal sinuses, both ethmoidal and both sphenoidal groups involved, that is, a pansinusitis, his sinus involvement figure would be eight. If he had only one antrum or the right ethmoidal group affected, the figure would be one. In the bronchiectasis patients, the sinus involvement figure per patient was 5.62, a higher figure than we have found in any other bronchopulmonary disease. Attention is called to the fact that these bronchiectasis patients were largely young individuals: only 3 of the 21 were past the age of 40; 15, were under 30; 7, were 20 or less. Yet all these patients were drawn from a clinic for adults only. Bronchiectasis is a well recognized and not infrequent condition in children. It is quite probable that a figure of sinus disease incidence in bronchiectasis, similar to ours, could be established in any pediatric clinic.

Lung abscess is a condition that is usually productive of large quantities of purulent sputum. The abscess may, of course, arise from a variety of causes, in some of which bronchial and other respiratory infection may have played a part. There is, however, one type of lung abscess in which we may presuppose a fairly normal state of things, at least as far as the sinuses are concerned, prior to the onset of the lung abscess, that is, the lung abscess that may follow tonsillectomy. Yet an examination of six patients with posttonsillectomy lung abscess, at intervals after the onset of the abscess ranging from five weeks to nine months, showed clinical evidence of sinus disease in five (83 per cent) and the x-ray evidence of sinus disease in every patient. One case is of particular interest—an x-ray study of the sinuses six months after the onset of the abscess showed all sinuses normal and clear. Ten weeks later, the x-ray showed dense clouding of both antra and of the right ethmoidal group, and the x-ray findings were confirmed by the rhinologist. It is easy to see how sinus infection may arise in a patient with a lung abscess. It should be remembered, too, that the sinus infection, if untreated, would tend to prolong the lung abscess.

A word on the means of diagnosing chronic sinus disease. Neither the x-ray nor the clinical examination of the paranasal sinuses is one hun-

dred per cent accurate, or comes anywhere near it. Of the two, the x-ray is the more sensitive, especially in the study of the ethmoidal and sphenoidal sinuses. The x-ray will pick up evidences of sinus disease, past as well as present. A positive x-ray finding, therefore, does not imply clinically active disease. The x-ray will often miss acute recent sinus infection. The clinical examination alone is able to give positive proof of active sinus disease, and that only if pus is seen coming from the ostium of the sinus. The clinical examination frequently overlooks chronic disease, especially of the ethmoidal and sphenoidal groups, if there is no abnormal secretion in the corresponding drainage areas and the mucous membrane as seen by the nasopharyngoscope shows little or no change. Patients with suspected chronic sinus disease had better be reëxamined several times before a negative clinical opinion is given. Transillumination findings are at times fallacious; polyps or mucoid secretion may transmit light normally; pathologic change produced by former sinus disease, or normally thick bone may be wrongly interpreted in terms of active disease. Neither method is, therefore, to be relied upon alone; both should be used routinely in the study of patients with suspected sinus disease.

If, then, chronic sinusitis is of such common occurrence in chronic infections of the bronchi and lungs, and if, as experience has shown, the sinusitis plays a definite rôle in the causation or the continuance of such bronchial and pulmonary disease, two important conclusions are obvious. First, in the examination of all patients with chronic bronchopulmonary infections, especially those productive of a purulent sputum, we should routinely make a careful investigation of the paranasal sinuses, both clinically and by x-ray, and these sinus examinations should be repeated at suitable intervals in those cases that last many months. Second, thorough treatment of the sinus disease becomes an essential part of the treatment of the great majority of patients with chronic bronchopulmonary infections.

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ABSTRACT OF DISCUSSION

Of Symposium on the Relation of Focal Infections to Systemic Diseases

Ernest W. Willetts, M.D. (Pittsburgh, Pa.): These three papers on focal infection were conservative, yet stated definitely everything we need to know on this subject. Without attempting to discuss the entire field that has been gone over by the three authors, a few of the points they made will be emphasized.

First, the great importance of remembering that we have focal infection in the young, and if we are going to do what we should in regard to this condition, the important thing is prevention. To do our duty we shall have to search more diligently, and particularly in the young, or develop a routine in the search of the apparently healthy for these foci.

In the treatment of intestinal lesions, infection in the mouth and tonsils should be cared for, no matter what the other treatment is. This is so evident that it scarcely needs emphasis.

Dr. Kern stressed the infection of sinuses in the asthmatic. Over eighty per cent of all their asthmatics have shown some evidence of sinus infection. No matter what else is involved this is a fact, and no matter what other treatment is undertaken, certainly it is only good common sense to rid the body of these foci. It is one thing to advise the removal of such foci, but it is another thing to tell the patient what the result will be. We agree that wherever focal infection is found, there is sufficient evidence to decide that it should be removed, but what this step will accomplish, only time can tell. The full benefit is derived when foci are removed before the remote effects have time to develop.

Alexander H. Colwell, M.D. (Pittsburgh, Pa.): My reactionary attitude toward focal infection is not because of an absence of splendid achievements accomplished by the elimination of focal infections, but because they have been so few. Of course it may be possible that the removal of any infected tissue from the body in itself may accomplish a good which cannot be measured. It is this possibility which makes our course of action so often very difficult to decide. One hesitates to subject a patient who is ill to the added hazard of anesthesia and pain without any certainty that the operation advised will be of tangible or immediate benefit.

We are easily tempted to be caught in a general enthusiasm for any procedure which affords the hope of helping baffling, or what have been incurable, diseases. The focal infection hypothesis has greatly stimulated the bacterial concept of disease which flourished so vigorously thirty or forty years ago. It is very necessary for us to remember that many cases of human disability do not have a bacterial origin. It is also necessary that we remember to apply any method of treatment with care and moderation and with due regard for the general well-being of the patient.

Focal infection doubtless causes remote disease. Attempts should be made to have such infections corrected in our patients, when circumstances seem to justify this course of action, and to keep before us the thought that many human ailments are produced by other than bacterial causes.

Thomas G. Simonton, M.D. (Pittsburgh, Pa.): I have felt for some time that focal infections, particularly of the sinuses and tonsils, were large factors in gastro-enteroptosis, because if patients have bacterial invasion in the throat or mouth when they eat they take these organisms into their stomachs, and at night during sleep they swallow some of these organisms, which lead to a catarrhal condition of the stomach, with more or less toxicity and loss of muscular tone. If there is sinus or tonsillar infection in these cases of gastro-enteroptosis, we are unable to get very far in relieving these patients, so it is my rule to have the tonsils examined by an expert, and not to put the patients on any form of diet or exercise, or any form of forced feeding or rest, until this has been attended to properly. A comparison of the results of removing sinus and tonsillar infection in these cases with those

in which it was not done showed a great deal better and quicker result, and more benefit to the patient. Any infection in the sinuses or tonsils should be removed before instituting any form of gymnastic exercise, any form of diet, or mechanical support, if the best results are to be obtained. These cases are often of long standing and there is relaxation of the bowel wall and relaxation of the sigmoid from absorbing these toxins, and it is necessary to tone up the system and eradicate all possible infection before we can hope to obtain the desired results.

Alfred Stengel, M.D. (Philadelphia, Pa.): It is quite important in matters of medicine generally that we should keep before our minds the thought that all human disease is not bacterial, and that the quest for focal infection in all kinds of conditions, however improbably connected with bacterial disease, is sometimes made more of a fad than actual scientific medicine. Nevertheless, it has been properly and conservatively stated that focal infection is frequently a very important factor in disease, and that its removal is followed with good results. In the majority of cases in which the removal of supposed foci of infection has been practiced, the results have been disappointing. That, however, does not prove that this is an undesirable direction in which to extend our diagnostic and therapeutic efforts. It shows we should not shut our eyes to other factors entering into disease aside from either focal or general infection.

The Ethics of Multiple Seizure

"Diseases desperate grown by desperate appliances are relieved or not at all."

Shakespere, however, was anticipated by Hippocrates who said that "Extreme remedies are very appropriate for extreme diseases."

"Multiple seizure" is the term applied by the authorities charged with enforcement of the Federal Food and Drug Acts, by which samples of suspected products are purchased simultaneously at several points and suits brought promptly at each point. This, of course, involves much greater expense to the marketers of such products than if only one purchase should be made. Complaint has been made by some persons and some organizations about this practice and the authorities have deemed it advisable to publish some facts in regard to the matter. It is pointed out that in many cases if only a single sample is libeled, the docket of the court in that locality may be so overloaded that months may elapse before a trial can be had, thus embarrassing both prosecutor and defendant. In further defense of the practice, the department has set forth in detail the character of some of the articles that have been seized under this system, and it is shown that they represent a most appalling array of fraudulent claims. The number of cases of multiple seizure is not large. From July 1, 1924, to October 1, 1929, about two score instances are enumerated, some of which have not yet been brought to court decision.

As an evidence that sale of this class of products is one of the most flagrant types of fraud, the following descriptions are taken from the department pamphlet. Full names and addresses of the manufacturers are given in the pamphlet, but these data are not necessary here.

A germicide and blood purifier, camphor and ether dissolved in linseed oil possessed neither germicidal nor antiseptic properties. In addition to the unwarranted name, the label presented the preparation as a treatment for rheumatism, asthma, catarrh, throat troubles, blood and skin diseases, diseases of the stomach and bowels, and ailments of an inflammatory nature, either internal or external. It was stated that the preparation would remove the cause of nearly all diseases. Consumption, pneumonia, la grippe, pleurisy, paralysis, syphilitic affections, and prostatic troubles were mentioned on the labeling.

Compounds Nos. 1 and 2. Both of these articles consisted of sodium and calcium borate, nitrate, and sulphate, extracts of licorice and uva ursi, a laxative drug and salicylic acid, with alcohol 5 per cent and water 90 per cent. No. 1 was offered for Bright's disease and No. 2 for diabetes.

Preparations recommended for psoriasis and chronic, stubborn eczema of all kinds. There were three of these, designated as No. 1, No. 2, and No. 3. They all contained chrysarobin, and in addition No. 1 contained ether, alcohol, and water, and No. 2 and No. 3 contained resorcin, salicylic acid, glycerol, volatile oils, alcohol, and water.

An ointment, consisting essentially of a mixture of fat and petrolatum in which was incorporated zinc oxid and traces of menthol and thymol was recommended not only for eczema, scrofulas, and boils, but also for diphtheritic throat, pneumonia, scarlet fever, and smallpox.

Spirit of niter, spirit of camphor, and similar preparations were found to contain isopropyl alcohol, which is forbidden by the U. S. Pharmacopœia, the addition being made solely for saving money in the manufacture.

A preparation especially intended for babies was found to contain morphin sulphate. It was recommended for free use to very young infants. Its sale was, of course, in violation of the Harrison act as well as of the general food and drug act.

A preparation composed mainly of Epsom salt in water with small amounts of other ingredients including iron, quinin, and strychnin salts was colored red with a coal-tar dye and labeled as a blood builder, and blood purifier. A thirty-two-page booklet accompanying the package consisted almost entirely of fraudulent representations regarding the effects of the preparation. In the booklet were numerous testimonials setting forth the virtues of the article for a wide variety of diseases, including boils and carbuncles, eczema, flu, high blood pressure, neuritis, pyorrhea, rheumatism, nervous prostration, etc. Other testimonials related to the effect of the preparation in increasing weight and improving physical appearance.

A mixture, essentially phosphate, glycerol, and water with a small amount of some vegetable extract, and colored with a red dye, was represented as a remedy for high blood pressure.

An injection, Rx 500, was a water solution of boric acid and zinc sulphate colored with a yellow dye. The label said "scientific remedy for all stages of membrane inflammation." "Will stop pus formation in two or three days. A boon to suffering manhood."—*The American Journal of Pharmacy.*

Patent medicines are being backed off the stage by patent foods, advertised to make the human race thin, fat, beautiful or full of "it," according to Dr. W. McKim Marriott, St. Louis, who spoke before the annual Congress of Medical Education and Hospitals of the American Medical Association, held recently in Chicago.—*Ohio State Medical Journal.*

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Editorials

MENTAL HYGIENE AND THE SCHOOL PHYSICIAN

No physician or group of physicians is in as strategic a position for promoting mental hygiene as the school physician, his colleagues, nurses, and teachers.

Primarily, the school physician is the medical officer representing the public in the protection and promotion of the health of school children. Beginning as inspectors in the control of infectious diseases, these men have enlarged their activities to include the physical survey of each school child. It is also gratifying to note that a progressive corps like that of the Philadelphia Public Schools have included in their survey the mental health of the child as well. It is also to be observed that the law relating to school inspection in the public school system of Pennsylvania makes it mandatory for the school physician to report on those children found mentally handicapped. The law also presupposes that such examinations are made and stipulates that if ten or more such cases are found in a school, special classes shall be provided for them. Adequate checks, however, on the ratio of mentally retarded children per thousand school children against the number of special classes in actual operation in the public schools of Pennsylvania reveal that thus far the law resolves itself into a presupposition and ends there. Furthermore a survey of retarded children presented for neuropsychiatric examination at State mental clinics reveals that in fully forty per cent of these boys and girls the solution of their problems lies in the hands of the school, its medical inspector, and nurse.

One must ask, in the light of the foregoing, is the indictment against the school system or against the school physician? The answer appears that both are equally to blame for the lack of fulfillment of the law. Is the apathy of the former caused by a misunderstanding of the needs, the retrenchment of costs, or adequate leadership? Is the apathy of the inspector due to inadequate leadership, or the lack of training in psychology and psychiatry, or inadequate pay? The answer some day will be revealed.

It does not behoove us to minimize nor criticize the public school system of Pennsylvania. Our interest is wholly in the welfare of the mentally retarded child and in the training and qualification of the school physician, who either stands for his assistance or his retardation. Our object in presenting the subject in this way is that we hope to enable the school physician to realize his relation to the mentally retarded child and to encourage him to further studies and research that he may be in a position to work shoulder to shoulder with the younger generation of teachers and nurses who, through many and varied sources, are cognizant of the mentally retarded child in their classrooms, his needs, and the skilled medical and vocational guidance required. Lurking infections with repeated outbreaks in a given school focuses the attention of the public not only on the school but on the inspector in charge. The time has also arrived when an enlightened public is concentrating its eyes upon the school which, and the school physician who, make no effort to salvage the mentally handicapped child, and is asking why.

TESTIMONIALS FOR SALE

An interesting sidelight was recently thrown upon the methods of quacks and patent-medicine vendors by the privilege (?) of perusing a letter from an individual in an eastern country town to a firm of manufacturing chemists, offering for a consideration of $100 down and one dollar for every letter of inquiry answered, to write a ringing endorsement of the marvelous beneficial effects upon his much-diseased body of the remedy offered for sale by the firm. This sharper naïvely wrote that he had charged his last customer, a well-advertised quack, $150 for a letter detailing a long list of ailments of which he therein asserted the aforesaid quack had cured him. This letter was widely published in the daily papers by its purchaser, and many inquiries poured in to its writer, who for the further

consideration of one dollar a letter answered each with a circumstantial description of the great benefits he had received from the charlatan's treatment.

Heretofore it has been assumed that it was the ever-present fools who furnished the Elysian feeding-ground for quackery, but it seems the clever knave has profitably preëmpted the fool's occupation, and thereby added materially to the accuracy and certainty of the returns from quack advertising. A more complete reduction to absurdity of the value of the *testimonial* could not well be found, to which to direct the attention of the few who think that physicians, because they do not advertise, are much behind the times. How completely gulled is the public by commendatory letters from persons, who, like enough, never saw the man or article they laud so highly! Until the method is widely exposed in the public prints (at the millennium?), it furnishes a lucrative field for the indolent, indigent residents of obscure localities.

Again we urge the county medical societies to launch an organized crusade against quack advertisements in the lay publications in their respective counties.

IS MAN DEGENERATING?

A correspondent asks us in all seriousness to tell him whether in our opinion man is degenerating. He desires especially to know (in the case of civilized man) whether the facts that man is gradually losing his hair, his teeth, and his eyesight, and that his skin is becoming thinner and more delicate and sensitive, and that he is also becoming more susceptible to pain and to shock, are proofs that he is degenerating?

We can only reply by asking our correspondent to furnish proofs for the unqualified statements just quoted from his letter. How does he know that man is losing his hair and his teeth with greater expedition than he did in the stone age? How is he assured that the eyesight is worse now than then? When it comes to the skin, who has made comparative measurements of its thickness in the United States of America on the one hand and in the fabled Atlantis on the other? As for pain, is man more susceptible than the modern ape, who is supposed to be still clinging closely to the ancestral tree? And as for shock, did our primitive ancestor or the "missing link" have to brace his nerves to meet the exigencies of such a civilization as ours? Could he have withstood railroad accidents, hotel conflagrations, polluted water, presidential elections, and modern competition any better than we? There is some advantage in dwelling in a cave instead of a twenty- to thirty-story apartment house.

Our correspondent should seek the aid of the anthropometrists, who go about taking man's measurements from the crown of his head to the soles of his feet. We frankly confess that we have not the data upon which to base a scientific conclusion. Our best authority on degeneration is Max Nordau, but he bases his study entirely upon art, letters, music, and painting. These products of man we have handy, and can compare them with those of the past; but when it comes to a question of such perishable commodities as teeth, hair, and skin, we are at a loss for a conclusion, and shrink from the responsibility of bringing an indictment against the whole human race based upon some insignificant failures in the development of man's epiblastic tissues.

IS MEDICINE BECOMING A PHILOSOPHY?

One hardly knows whether medicine, which came first as religion, then an art, now a science, is becoming a philosophy. Be that as it may, "aside from our instruments of precision, we must approach the patient with a philosophic attitude in order to consider him as a whole." Thus speaks the philosopher.

First and foremost from whence did he come; what is he inherently biologically; what is his push; what is his reserve; what is his reaction to the situation in which he finds himself; what is the outlook; what can be done for him? What disease (biologically) was he born with that will eventually close the picture? Does he need understanding, medical or surgical treatment, economic assistance, or improvement of home conditions? Shall we taffy him or tell him the truth?

The philosophic approach in mental medicine is as follows: We should consider the patient's epoch of life. Is he under twenty, in that particular period so conducive to weakness, neuroses, psychoneuroses, sex undermining, postinfections, and dementia precox; or does he belong to that other cloistered group of idiocy, imbecility, or with that of conduct disorders?

When he presents himself between twenty and forty, we should regard him as in that browsing-around period. Has adaptation been complete; what are his purposes; what are his failures and successes; what are his reactions; and into which category does he fall?

When he comes between forty and sixty, we should regard him as the dancer who is paying the fiddler, either with his heart, his kidneys,

his liver, his teeth, his tonsils, his sinuses, his eyes, his ears, or his prostate.

When sixty and over, pathetic as it may be, we must regard him as an old ship with barnacled bottom, lying in harbor with steam up, but in slow gear, while the captain (his mind) is absent from the deck either in day-dreaming, philosophizing, absentmindedness, playing checkers, or speaking of the good old days. Yea, the good old days that wrecked the ship.

Thus we find the philosopher helpful in mental medicine, which is yet to be cleaved from dogmas.

When we turn to general medicine and surgery, whose cleavage was complete when Jenner gave us a science, philosophy appears a little out of place. To say a man is going to die from what his grandfather died is rather a slap at our so-called scientific medicine; that is, when it applies to chronic arthritis, cardiorenal diseases, etc. It speaks too much of the olden days—"Your father had tuberculosis and died, so will you."

We of the mental game look to the day of scientific precision in our work as practiced by internists and surgeons. We are a little weary of a philosophopsycho-analytic pseudoscience. It would be most unfortunate if in our retreats therefrom we met surgeons and internists returning thereto. We look to them to stand at least on the firing line or else we will be forced to retreat to padded cells, asylum methods, witchcraft, the moon, and the stars. Consider your patient as a whole, but beware of too much philosophy.

Philosophy is a wonderful thing, but it makes rather wavering deductions of this and that. It's fine for an old man—it comforts him; but it's blinding to youth. Youth is the age of science. The chloroform period is the age of philosophy. If a man has a pain in his abdomen, or a woman has the pains of labor, they call for the youthful hands of science and not the hands palsied with philosophy. In the practice of general medicine, therefore, let us have striving youth with judgment, action, and results, or old men who remain with similar qualities.

DA COSTA SURGICAL NIGHT

The dinner and meeting in honor of Dr. John Chalmers Da Costa held in the Roof Gardens of the Bellevue-Stratford Hotel on Wednesday evening, April 30, 1930, also inaugurated the Da Costa Foundation which was established for the postgraduate teaching of physicians and to which all who attended the dinner subscribed.

The event was one ever to be remembered by that great assemblage of physicians who gathered from far and near to do honor to their gallant colleague, physicians whose names and skill are nationally and internationally known. None were too great to do him homage on that night. Four hundred guests thronged the South Garden, which was devoted to the dinner, and seven hundred crowded the Rose Garden and adjacent corridors during the meeting which followed.

Dr. Da Costa attended the early portion of the meeting and, after a vociferous welcome, addressed a tensely listening audience, which hung upon his every word.

"I am coming to the end of life—and perhaps I have reached the autumn—or more than the autumn.

"But, when that time comes, you have a recompense. You have the leaves. These leaves are strewn in the pathway, leaves of gold and crimson—and I am receiving them now. I am receiving them here—and my pathway is being strewn with crimson and gold."

His voice husky, almost inaudible with emotion, Dr. John Chalmers Da Costa intoned the words, slowly, softly, almost with the sense of valedictory, to his comrades of the Philadelphia medical world.

Those few brief moments in the Roof Garden of the Bellevue-Stratford, where the famous 68-year-old professor of surgery in Jefferson Medical College received the affectionate and unrestrained tribute of his fellows, were etched in unforgettable colors, and set to a timeless harmony.

They were fraught with intense, almost unbearable, undertones of emotion. It was like a sonorous anthem from Goetterdammerung.

Among the hundreds of men and women who crowded the narrow hall to its capacity and who thronged the corridors without were the greatest names in this city's medical annals. Surgeons, physicians, professors whose names have rung 'round the world, teachers, preceptors, scientific immortals.

And yet, about the dais upon which Dr. Da Costa was seated in his chair, his chin sunken upon his breast, they sat like children, or like pupils of a gray and stoic philosopher of old, drinking up his words with rapt attention, feeling their sadness, struggling against the inevitable conclusion which they invoked.

Dr. Da Costa was the guest at a testimonial dinner tendered him by The Philadelphia County Medical Society, and not in years has there been such an outpouring of Philadelphia's medical scientists.

Dr. John A. McGlinn, president of the Society, presided, and the famous alumnus, professor and surgeon of Jefferson was introduced by Rear Admiral Albert Gleaves.

"He is an example of patience, restraint and cheerfulness," the Admiral said, "and he embodies the noblest virtues of a noble profession. If the circumstances permitted, I would love to drain a glass in his honor."

Dr. Da Costa, seated in his chair, raised his head and looked over the gathering for a moment, his sober gaze flitting from face to face in the smoke-hung room.

"Now, I am supposed to speak here tonight," he said, "but I'm not equal to it. I'm too much knocked out."

Then, with characteristic briskness, he paid glowing tribute to the medical society, declaring that it rescued the profession in this city "from a more or less concentrated limburger cheese rottenness."

Then, suddenly, the briskness of his voice sank to a husky whisper. Emotion flooded the room with its gentling tides as with a gallant gesture he swept the gathering with one hand, saying, "But I am coming to the end of all this."

Other speakers were to follow him, speaking of their discoveries in tribute to him. Dr. Rudolph Matas, of New Orleans, whom he described as "one of the greatest, if not the greatest surgeon who ever lived in America"; Dr. Walter E. Dandy, whom he designated as "that young man who has his own subject which he has studied and proved about the circulation of the cerebella"; and Dr. John B. Deaver, of whom he said, "You can't say that Deaver's like anybody; you can't; he's just Deaver, that's all, and anyone trying to be like him would make an awful mess of it."

Dr. Matas, originator of the world-famous Matas operation for the suturing of aneurisms, and Dr. Deaver, former John Rea Banton professor of surgery in the University of Pennsylvania Hospital, looked fixedly at the floor. Other heads were bowed. The room was swept by a spirit mightier than simply a tribute to a man of great deeds and gallant fighting heart.

As suddenly as his voice had fallen, it rose almost to a clarion call, but touched with a cry of mighty longing:

"When I think of this great compliment that you have paid to me," he cried, "I say, give me my old enthusiasm, the ardent longings which I had; give me back my instruments, give me back my youthful longings, and those splendid dreams of my youth."

His voice so choked with emotion that it could not be heard a dozen feet distant, he concluded, simply: "I thank you from the bottom of my heart."

As he left the room there was no loud applause. Rather, hands reached out to press his, hands to pat him affectionately on the shoulder, and here and there a voice from a silvered head, striking the shackles from the years, "Good-bye, Jack!"

This fine description written by Mr. John H. McCullough, for *The Philadelphia Inquirer,* most accurately senses the tremendous drama which was there enacted, and those whose privilege it was to attend that great meeting, to take part in that ovation to a beloved comrade, will see to it that the Da Costa Foundation is increased to such a sum that its income will be adequate to carry on the practical postgraduate course of teaching such as has been visioned.

The red leaves of experience—the golden leaves of wisdom—let them fall, let the winds scatter them whither they will, they form a great book, an indestructible record, from which each future generation reads. Let the leaves be garnered and the experience and wisdom of the great teachers of today, enhanced by the research of tomorrow, ever continue to be transmitted to the physicians of Philadelphia through the agency of this permanent Foundation, to the end that the health of that public which the profession serves shall be more securely safeguarded.

Dr. W. W. Keen has been appointed Honorary President of the Da Costa Foundation and Dr. John A. McGlinn, permanent chairman. An immediate nation-wide campaign for additional donations will be inaugurated. One hundred thousand dollars is the goal set by the Committee as the ultimate amount of the Foundation.—*The Weekly Roster and Medical Digest.*

S. LILLIAN CLAYTON, R.N., AN APPRECIATION

The sudden death of Miss S. Lillian Clayton, R.N., of Philadelphia, on May 2, robs the nursing profession and the State of an outstanding leader.

Miss Clayton was a pioneer in the hard, aggressive work necessary to place the nursing profession upon its present high standard of efficiency. A graduate of the Training School for Nurses of the Philadelphia General Hospital in 1896, Miss Clayton at once assumed a leading position in constructive work and education, the results of which are evident in the attraction of "Blockley," not only as a training school, but for affiliated nurses to come to that institution from all sections of this country, as well as from foreign lands.

Miss Clayton occupied the unique distinction of "apostolic succession" in nursing from its fountain head, Florence Nightingale. Miss Alice Fisher, who was trained under the direct tutelage of Florence Nightingale, organized the Nurses' Training School at "Blockley," in 1895. Miss Marian E. Smith, trained by Miss Alice Fisher, was her successor, and she, in turn, trained Miss Clayton.

Miss Fisher is buried in Woodlands Cemetery, adjoining the Philadelphia General Hospital. Miss Smith instituted the Easter Morn pilgrimage to Miss Fisher's grave. Only a few days before her own death, Miss Clayton led the procession in honor of Miss Fisher. It is fitting that Miss Clayton rests next to Miss Fisher, so that at each annual pilgrimage, the nurses will pay tribute to the memory of the two outstanding members of the nursing profession.

JOTS AND TITTLES

Researches and Discoveries

Dr. W. W. Skinner, of the Bureau of Chemistry and Soils, United States Department of Agriculture and the National Cottonseed Products Association announced, May 10, that cottonseed meal, commonly used as a cattle feed, has been found to be a substance rich in vitamin G, the antipellagra vitamin. In addition to being rich in vitamin G, Henry Stevens who has been in charge of nutrition studies on cottonseed meal, stated that he found cottonseed meal to be an important carrier of vitamin B, the anti-beriberi vitamin. Stevens used rats in his first tests of the nutritive value of cottonseed meal. This unexpected discovery led to further studies in an effort to determine how the vitamin content of

cottonseed meal compared with other materials. This work led to the conclusion that cottonseed meal ranks next to yeast in content of vitamins B and G. Yeast, considered by chemists to be the richest known source of these two vitamins is used as a specific in the treatment of pellagra, but the cost of yeast is high to sufferers from the disease.

Pilchard oil, four million gallons of which are produced annually from California sardines, is proved to be as rich in vitamin D as cod-liver oil. Tuna oil, equally rich in this vitamin, is less abundant. Salmon oil is about one-half as rich in vitamin D as cod-liver oil, and its vitamin A content is about the same as the poorer grades of cod-liver. Because of the great supply, the price paid for vitamins A and D in salmon oil is now lower than the price paid for those vitamins in cod-liver oil. The federal chemists believe that manufacturers can change their methods and improve the vitamin A content of salmon oil. At present the production of salmon oil is slightly less than that of cod-liver oil. Since the supply, however, can be increased five or sixfold, because millions of pounds of salmon offal from which the oil could be recovered are dumped into Alaskan waters every year, these findings are considered significant.

Although Dr. Frederick S. Hammett, of the Lankenau Hospital in Philadelphia, advanced no claim to having found a cure for cancer, he has stated that transplantable tumorous growths in mice have been caused to diminish, and, in at least one case, to disappear, by the application of an organic compound containing partially oxidized sulphur. Dr. Hammett's experiments have had much more comprehensive aim than an effort at the solution of the cancer problem, but have been an endeavor to discover the chemical secret of all growth by cell multiplication. He stated, some time ago, that he had found the stimulus to cell division in the chemical group known as sulfhydril, consisting of one atom of sulfur and one of hydrogen. By applying various substances containing this sulfhydril group he succeeded in stimulating growth in various plant and animal tissues. One of his colleagues has tried a sulfhydril compound on obstinate open wounds and sores of various types, and the resulting rapid growth of new tissue has brought about the cure of a number of long-standing cases. After satisfying himself that growth by cell multiplication is stimulated by sulfhydril, Dr. Hammett undertook to determine why growth is checked under natural conditions. Since oxidations processes go on rapidly in growing tissues, it seemed natural to infer that the sulfhydril compounds were oxidized, and that as they added more and more oxygen to themselves they lost the power to stimulate cell division. He applied partly-oxidized sulfur compounds to growing plant and animal tissues, as he had originally applied sulfhydril compounds, and found that the oxidized substances caused a slowing down of growth. His successful experiments on the mouse tumors followed.

Drs. Charles Armstrong and R. D. Lillie, surgeons of the United States Public Health Service, have found that by employing a virulent testicular vaccine virus and the respiratory route of inoculation, a highly fatal heretofore undescribed vaccinal pneumonia, usually lobar in type, was produced in rabbits and could be carried in series through eight generations. This pneumonia is essentially serofibrinous in nature, without leukocyte exudation, with focal coagulation necroses in bronchial and alveolar epithelium, and with lymphangitis and peribronchial lymphadenitis identical histologically with that produced in regional lymph nodes by skin vaccination of both rabbits and monkeys with this virus. The vaccinal nature of the lung lesions is indicated by the character of the reaction, including the occurrence of Guarnieri bodies in the alveolar and bronchial epithelium; by the demonstration of the rich virus content of the affected lungs; by the fact that animals immune to commercial calf virus are relatively highly resistant to pneumonic infection when the macerated pneumonic lung tissue is employed as the inoculum; and by the existence of mutual cross protection between the rabbit lung virus and commercial calf virus, employing the customary cutaneous vaccinations.

A new kind of milk, the curd (of easily assimilated casein content) of which approximates the softness of mother's milk, and which promises to have a revolutionary effect on infant feeding, has been announced by the president of the Sheffield Farms Company. The new product will be known as "soft-curd" milk and may be described as a supercertified grade. It is the first time that such milk has been made commercially available to any community. Although soft-curd milk differs greatly from ordinary milk, the difference is purely a natural one. No change is made in the milk itself after it is obtained. Scientific work leading to the ultimate production of such milk was first begun in 1914 by Dr. S. S. Buckley, of the Maryland Agricultural Experimental Station, and followed by work done by Dr. R. L. Hill, of Utah, who found that soft-curd milk was highly valuable for infant nutrition. Dr. Hill's researches were supplemented by recent experiments made by Dr. E. V. McCullum, of Johns Hopkins University, who ascertained important facts concerning the protein content of such milk. Production of the new product on a commercial scale is claimed to be the most important development in dairying since the pasteurization process was introduced. Cows must be tested for soft-curd production, and by segregation and selective breeding of these animals, soft-curd herds may be developed.

Federal Control of Cancer Centers Advocated

In a statement just incorporated in the record of the Senate Commerce subcommittee, which has been holding hearings on cancer under direction of the Harris resolution, Dr. Ellice McDonald, director of cancer research in the Graduate School of Medicine at the University of Pennsylvania stated that cancer centers should be located in the centers of population throughout the United States and should be brought under government supervision so that the equipment is complete and the medical personnel trained and skilled in radiation and surgery. Cancer is the greatest human problem of our time because it kills more persons than any other known single agency. Cancer is not only taking a larger toll than war, pestilence, or diseaster, but is yearly increasing the number of victims.

Considerable effort through government agencies is made toward the purchase of radium, because radium is, at the present, the safest bet in the treatment of cancer. Until a few years ago surgery was the only means of cancer treatment. Now radium and x-rays have improved the outlook for cures, so that many cases of cancer which could not be treated by surgery may be benefited by radiation with radium and x-rays. This makes a supply of radium a necessity. Cancer can not be treated under modern conditions without radium. Radium production is a monopoly of a Belgian company that owns rich radium deposits and sells radium at $70,000 per gram in one gram lots and $50,000 per gram in four gram lots. The estimated cost of production of this radium is in the neighborhood of $20,000 per gram. The maintenance of such a high price for radium limits its use decidedly because hospitals and cancer centers

cannot afford to buy it. A complete cancer center will need approximately eight grams of radium. Cancer is an international problem; all countries are in great need of a larger supply.

It was unanimously agreed by a group of physicians representing recognized hospitals and clinics of the nation, that a national survey of methods for control of cancer should be conducted by the Public Health Service.

"Construction Cost" of Average Child

The White House Conference on Child Health and Protection announced on May 5, that more than $6,000,000,000 can be saved annually in the United States if Americans would apply available knowledge on preventive medicine and public health. This loss represents the productive value of those affected, and included in the amount are seven days per year which constitute what the average American loses from work on account of sickness. This Conference is gathering statistics of all kinds on the medical side for safeguarding the health of the future citizens. From a study of the Metropolitan Life Insurance Company charts, the Conference found that if the average family income is $2500, it costs the parents $7238 to rear a child between birth and the age of 18 years, and of this amount $534 is expended on its health. Man has "construction cost" during childhood while he is being prepared for service. It is estimated that a baby boy at birth, coming into a family whose annual income is $2500, has an economic value amounting to $9333 which increases progressively to $28,654 by the time he is eighteen years old. The value of a child at birth is the amount which it would be necessary to put out at interest at 3½ per cent to rear the child to eighteen years and to produce the net income he is expected to earn throughout the working period of his life. In an age of industrial activity and more and more scientific training, the intimate connection between the health of the potential producer and the economic value of his service to his community and the nation at large, make necessary every precaution by the parents to prevent wastage of that human power.

Athletic Reforms Urged in Schools

There are two primary needs of physical, sports, and health education in the primary and secondary schools and in the colleges of the country, in the opinion of William R. LaPorte, a member of the Society of Directors of Physical Education in Colleges, which met recently in New York City. The first need is a sound and authoritative evaluation of the various activities. The second is the general adoption of a curriculum based upon the evaluation. "Our difficulty is this," Mr. LaPorte said, "in the past physical education has been looked upon as a subject, as is algebra or ancient history. It is not a subject; it is a field of education, and as such demands a curriculum of its own. Unless we have a comparative evaluation of the numerous activities which come under physical and sports education, however, such a curriculum cannot be brought into existence. To find out, by research, what this curriculum should be is the objective of the committee. Swimming takes the highest rating from the physical value point of view, because swimming develops a symmetrical use of the muscles. Furthermore, water supports the swimmer, gravity is nullified, and for that reason the muscular body is developed in a position nearer to normal than in any other kind of athletic activity. It is to be noted that a good swimmer who swims often has a well-balanced posture not only in the water, but out of it." In commenting upon the fact that swimming took first place, Mr. La Porte said that if the aims for which the research committee was formed were achieved, a swimming pool would be considered as necessary to every school or college physical education department as microscopes to the biological laboratory.

Wider Health Work Urged on Doctors

In his recent report to Mayor Walker, Health Commissioner Shirley W. Wynne told of the increasing participation of the private physician in the city's program of preventive medicine.

"I have repeatedly emphasized my conviction that private physicians should be assisted to practice preventive medicine, and that as far as possible the Department of Health should turn over to the private physician this phase of the work," Dr. Wynne says in his report. "To facilitate this I have held conferences with representatives of the medical societies. In a number of instances I have succeeded in decreasing the work of the Department of Health in certain fields and incidentally in extending the sphere of the private physician. In the campaign against diphtheria, for example, our efforts have been so successful that approximately one-third of all the children were immunized by their family physician. A similar excellent result followed our efforts to have new school entrants examined by the family physician rather than by the department. In Queens, for example, nearly 4000 out of 20,000 children newly admitted in September, were examined by their family physician."

"Public policy requires that health service should be paid for by those able to do so. But still more important is the consideration that private physicians should be encouraged and assisted in practicing preventive medicine. I believe that the department should extend the laboratory facilities and assist in following up patients, in supervising expectant mothers, and in helping physicians to canvass their clientele for diphtheria immunization, medical inspection of school children, and periodic medical examinations. It is very gratifying that this departure from the accepted methods of health administration has evoked hearty commendation from numerous leaders in health work."

Of the work of the Diphtheria Prevention Commission, appointed a year ago, the commissioner reports as follows:

"It is now one year since the campaign to rid the city of diphtheria started. Without adding a single doctor or nurse to the existing staff of the department we protected 200,000 children by more than a half million inoculations. The year's work resulted in the saving of 180 children's lives in 1929 over 1928 and there were 2226 fewer cases of diphtheria than the year previous. This was done by mobilizing every private and public facility to the end that no parent should be without the knowledge that children could be saved from this deadly and dangerous disease and by providing the facilities to make them immune. The city owes its gratitude to the Diphtheria Prevention Commission and particularly to its chairman, Thomas W. Lamont, whose leadership has given such great prestige to this life-saving work."

Concerning the work of other private individuals and agencies, the commissioner continues in his report: "From various publications and public meetings we have been advised that there never was a time when so happy a relationship existed between the private agencies engaged in public health work and the department. In recording this fact I desire to say, in justice to these agencies which annually spend millions of dollars for the protection of the public health, that they have rendered the greatest possible assistance to the city. We

have constantly sought to utilize the valuable facilities which they possess and offer freely. This coöperation has saved the city hundreds of thousands of dollars, and by the same token it has enhanced the work of these private groups."

The report also touches on improvements in the medical examination of school children, the extension of tuberculosis work under Dr. James Alexander Miller, regulation of blood donors, the tests of the Noise Abatement Commission, mosquito eradication by the digging, at a cost of $100,000, of ditches whose total length would stretch from New York to Savannah. The largest number of these ditches were dug in Queens, where the total length exceeds 400 miles.

The report also thanks and felicitates Mayor Walker on his help in establishing neighborhood health centers. "For some time there has been a growing need for the development of adequate neighborhood health facilities for the people who are too poor to engage private doctors. The whole trend in public health work has been in the direction of locating health facilities in a scientific manner based upon population, economic conditions, and geographic considerations. Last year I appointed a Committee of Neighborhood Health Development consisting of those most familiar with this phase of work. This committee has made a very important report. This committee presented its preliminary report to you on October 28, a report which recommended an expenditure within the next four years of approximately $4,000,000 for the establishment of sixteen neighborhood health centers. The encouragement and impetus which you have given to this city-wide development is one of the most progressive steps in preventive health work ever undertaken in a large city and follows closely upon the experiments of private agencies with which the department has been in close coöperation. These organizations have spent hundreds of thousands of dollars in similar experimental developments in order that the city may benefit by such pioneering. When these sixteen health centers are established they will provide the people of the city with local centers which will contain baby health station service, neighborhood visiting nurse service, chest and dental clinics, a maternity service, a nutrition service, and a variety of other services which, in time, will have a marked effect in reducing preventable illness and improve the health of the city."—*N. Y. Times.*

PUBLIC HEALTH

Contagious Disease Decreases in Pennsylvania.—The State Health Department's report shows contagious diseases were less prevalent during 1929, and typhoid fever set a new low record last year. In comparison with 1929, when of every 100,000 children in the State, 234 had diphtheria, only 75 of the 100,000 had diphtheria last year, because of the toxin-antitoxin campaign. Scarlet fever was less frequent than at any time in ten years.

More convincing, however, are data to show that the average expectancy of life today is about twenty-one years longer than it was as recently as 1910. The medium age at death in 1910 was 34 years; in 1928, it was 55 years. Despite an increase in population of almost 30 per cent since 1910, the 1928 deaths in a larger population were no more numerous than the 1910 deaths in a smaller population.

The number of children dying in their early years now is only one-third as great as twenty years ago. In every age-group up to 35 years, there are fewer deaths now than a score of years ago, but above the age of 45, deaths have increased almost 50 per cent, because of diseases of old age among a larger population of aged persons.

The greatest longevity, the report finds, is in the native-born white population, for which the median ages at death in twenty years have increased from 18 to 51.5 for males and 23.5 to 56 for females. For the colored population, the median in the same period increased from 29 to 36 years for females. The native white person who reaches the age of 20 years today has the prospect of attaining the average age of 64.5 years now as compared with the average age of 59 years in 1910. Despite improved general health, a large number of cases of communicable diseases were reported to the bureau in 1929. They included 48,348 cases of measles, 23,646 of chickenpox, 19,171 of whooping cough, 15,287 of scarlet fever, 11,984 of mumps, 8246 of pneumonia, 8168 of tuberculosis, 7422 of diphtheria, 1649 of German measles, and 1261 of typhoid fever.

Reducing Tuberculosis among the Indians.—The National Research Council of Canada and the Indian Department of Canada have jointly undertaken to demonstrate what can be accomplished in the reduction of the tuberculosis death rate among the Indians by the application of public health measures calculated to improve the general health of Indians. Dr. Austin B. Simes, Abernethy, Sask., is medical superintendent of the demonstration working under the direction of Dr. Forest G. Ferguson, Fort San, Sask., local director of Indian research. The National Research Council, it is said, is giving a grant of $6000 a year toward this work, which is being carried on at Qu'Appelle and File Hills Reserve, Sask.—*J. A. M. A.*

Mental Hygiene Said To Be Public Health Problem.—In speaking before the First International Congress on Mental Hygiene, Washington, D. C., May 6, Dr. Haven Emerson, of the College of Physicians and Surgeons, New York City, stated that there are 10,250,000 persons in the United States suffering from some narrow, warped, and tangled mental condition. His researches show that out of a population of 120,000,000, there are 4,560,000 children under five years of age who reveal mental kinks that unless corrected will give rise to greater disturbances. He claims that there are 3,135,000 children out of the same population who require professional assistance. The magnitude of mental hygiene as a public health problem and the organization of facilities for the prevention, care, and treatment of nervous and mental diseases constituted the general scope of the discussions before the congress.

Noise in New York City.—To provide sufficient legal authority to secure the abatement of loud, excessive, and unusual noises from radios, phonographs, or other sound-making devices, the board of health of New York City, on April 8, adopted the following, to be effective immediately: Section 215-a. No person owning, occupying, or having charge of any building or premises or any part thereof in the City of New York shall cause, suffer, or allow any loud, excessive, or unusual noise in the operation or use of any radio, phonograph, or other mechanical or electrical sound-making or reproducing device, instrument, or machine, which loud, excessive, or unusual noise shall disturb the comfort, quiet, or repose of persons therein or in the vicinity.

Sanitary Survey of Nicaragua Canal Zone.—Since the arrival of Dr. Jacinto Perez, director general de Sanidad of Nicaragua, and Capt. J. J. Figueras, Medical Corps, United States Army, at San Carlos, the sanitary survey of the Nicaragua Canal Zone has been

progressing satisfactorily. The primary purposes of the survey are to determine the sources of diseases prevalent in the area with special attention to human carriers, prevalence of insects, and the breeding places of those known to transmit diseases; the extent to which the present inhabitants of the zone of the canal are infected by these diseases; and the water supply for domestic purposes available in the zone and the incidence of disease conveyed by its present use. This sanitary survey will be of enormous benefit to the present inhabitants of the zone, as it will determine the character of the diseases now prevalent in the area and, where practicable in the field, treatment for the cure of the diseases will be given. The most prevalent diseases have been found to be hookworm; dysentery, both amebic and bacillary; and malaria. Some 750 individuals have been examined in the San Carlos area and specimens have been taken for laboratory study.

Jamaica Ginger Paralysis.—According to Dr. James M. Doran, Commissioner of Prohibition, there are hundreds of cases of paralysis among human beings caused by drinking Jamaica ginger as a stimulant. "The increase in the number of cases," said Dr. Doran, "is a matter of national concern. We are doing every thing in our power to stop it." He explained that efforts are under way to find the reason for the paralysis and also to identify and prosecute the sources. The Department of Public Health and the Food, Drug, and Insecticide Administration of the Department of Agriculture are coöperating in the research and investigation with the object of possible prosecution. Victims are being brought into hospitals in wheel chairs and in ambulances. Most cases were said to be reported in Mississippi, others in Alabama, Arkansas, Kentucky, Tennessee, Oklahoma, and parts of New England.

Reduction of Diphtheria by Immunization.—The work done in Iowa in connection with the prevention of diphtheria, last year, compared with the five-year period preceding the immunization program, resulted in the prevention of 3120 cases of diphtheria and 208 deaths from that disease. It is estimated that immunization saved the state $320,000 in actual money, and resulted in an economic gain of $1,672,000. On an average there is one death for every 15 cases of diphtheria. This reduction in the number of cases of and deaths from diphtheria is due almost entirely to the protection of most of the children of the state by immunization with toxin-antitoxin.

Morbidity in Pennsylvania in March, 1930

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Aliquippa	11	44	1	0	4
Allentown	7	9	25	0	19
Altoona	3	1	19	0	18
Ambridge	0	0	0	0	0
Beaver Falls	0	0	2	0	1
Berwick	2	5	6	0	0
Bethlehem	2	0	2	0	3
Braddock	1	0	4	0	7
Bradford	3	0	3	0	27
Bristol	4	111	2	0	5
Butler	1	91	0	0	20
Canonsburg	0	5	0	0	0
Carbondale	0	0	0	0	0
Carlisle	0	0	2	0	3
Carnegie	2	1	3	0	1
Chambersburg	0	0	3	0	4
Charleroi	1	14	2	0	1
Chester	2	2	6	0	1
Coatesville	4	3	1	0	1
Columbia	0	0	0	0	0
Connellsville	1	0	0	0	0
Dickson City	0	0	0	0	0
Donora	0	1	0	0	1
Dubois	0	7	0	0	0
Dunmore	1	0	5	0	5
Duquesne	2	1	4	0	1
Easton	1	33	41	0	1
Erie	3	6	7	0	31
Farrell	2	4	1	0	0
Greensburg	0	25	1	0	0
Harrisburg	0	2	17	2	15
Hazleton	18	0	5	0	6
Homestead	2	24	7	0	0
Jeannette	0	0	0	0	0
Johnstown	6	3	14	0	42
Lancaster	2	59	2	0	9
Lebanon	2	2	11	0	0
McKeesport	0	12	4	0	4
McKees Rocks	1	2	0	0	0
Mahanoy City	1	0	0	0	1
Meadville	1	112	2	0	8
Monessen	18	1	2	0	0
Mount Carmel	0	0	2	0	0
Nanticoke	1	6	2	0	0
New Castle	1	51	1	0	4
New Kensington	1	5	0	0	0
Norristown	1	39	2	0	4
North Braddock	1	1	1	0	7
Oil City	0	1	5	0	2
Old Forge	0	0	0	0	0
Olyphant	0	0	0	0	0
Philadelphia	91	521	605	0	81
Phoenixville	0	0	0	0	0
Pittsburgh	76	937	128	0	143
Pittston	2	0	2	0	0
Plymouth	3	0	1	0	0
Pottstown	0	2	8	0	0
Pottsville	2	1	0	0	0
Punxsutawney	1	0	3	0	0
Reading	7	4	15	0	57
Scranton	6	2	15	1	2
Shamokin	1	2	0	0	0
Sharon	1	26	3	0	0
Shenandoah	13	0	0	0	0
Steelton	0	0	1	0	0
Sunbury	0	1	2	0	0
Swissvale	0	5	1	0	12
Tamaqua	0	0	0	0	0
Uniontown	2	128	10	0	19
Warren	1	167	2	0	2
Washington	0	44	0	0	20
West Chester	1	1	1	0	3
Wilkes-Barre	15	5	93	0	9
Wilkinsburg	5	8	15	0	10
Williamsport	2	173	13	0	30
York	1	99	4	0	1
Total Urban	338	2809	1139	3	645
Total Rural	255	2577	992	39	716
Total State	593	5386	2131	42	1361

Morbidity in Pennsylvania in April, 1930

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Aliquippa	13	71	7	1	2
Allentown	3	3	34	0	8
Altoona	2	5	15	0	4
Ambridge	8	1	15	3	17
Beaver Falls	1	1	5	0	0
Berwick	0	0	0	0	0
Bethlehem	1	2	8	0	16
Braddock	0	0	4	0	1
Bradford	0	0	1	0	5
Bristol	1	48	3	0	1
Butler	0	6	2	0	14
Canonsburg	0	6	3	0	0
Carbondale	6	0	0	0	0
Carlisle	0	3	0	0	1
Carnegie	0	1	1	0	1
Chambersburg	0	0	0	0	0
Charleroi	0	11	0	0	2
Chester	4	7	2	1	1
Coatesville	7	7	1	0	3
Columbia	1	3	1	0	0
Connellsville	1	1	4	0	8
Dickson City	0	0	0	0	0
Donora	0	1	0	0	0
Dubois	0	16	0	0	0
Dunmore	0	1	3	0	2
Duquesne	1	5	3	0	0
Easton	1	11	19	0	5
Erie	1	7	4	0	32
Farrell	0	0	0	0	0
Greensburg	0	34	0	0	0
Harrisburg	0	2	15	2	10
Hazleton	26	4	3	0	0
Homestead	1	5	10	0	0
Jeannette	0	6	1	0	0
Johnstown	5	1	10	0	40
Lancaster	2	48	3	0	6
Lebanon	1	2	14	0	1
McKeesport	1	11	2	0	0
McKees Rocks	6	2	2	0	0
Mahanoy City	0	1	0	0	0
Meadville	0	0	0	0	0
Monessen	7	0	0	0	2
Mount Carmel	0	0	0	0	0
Nanticoke	1	9	1	0	0
New Castle	2	15	0	0	4
New Kensington	0	17	0	0	0
Norristown	1	91	1	0	9
North Braddock	2	4	1	0	5
Oil City	0	0	1	0	4
Old Forge	1	0	0	0	0
Olyphant	0	0	0	0	0
Philadelphia	55	1049	572	1	60
Phoenixville	0	2	4	0	0
Pittsburgh	39	1003	81	1	91
Pittston	4	0	0	0	0
Plymouth	2	1	1	0	0
Pottstown	2	0	10	0	0
Pottsville	3	2	0	0	1
Punxsutawney	1	0	2	0	0
Reading	3	9	12	0	36
Scranton	1	7	19	2	6
Shamokin	3	28	2	0	0
Sharon	1	8	5	0	0
Shenandoah	4	0	1	0	0
Steelton	0	3	2	0	2
Sunbury	0	2	4	0	0
Swissvale	1	6	0	0	4
Tamaqua	0	1	0	0	2
Uniontown	0	150	0	0	0
Warren	0	74	0	0	2
Washington	0	3	1	0	24
West Chester	0	1	0	0	2
Wilkes-Barre	7	1	42	0	6
Wilkinsburg	2	34	12	1	0
Williamsport	3	234	17	0	14
York	2	45	16	0	2
Total Urban	240	3132	1002	12	456
Total Rural	208	2815	867	33	533
Total State	448	5947	1869	45	989

PHYSICAL THERAPY

Radio Fever

At a recent meeting of the American Physical Therapy Association, Charles M. Carpenter and Albert B. Page of the Research Laboratory of the General Electric Company demonstrated apparatus which makes possible the production of fever in the bodies of animals and men by means of the short radio waves. Heat has long been used to alleviate pain and treat some diseases, but only recently it has been found that the germs of certain diseases could be killed in the body by high temperatures. This method of treatment has beeen used with some success for paresis. The fever was produced by various agents, such as continuous hot baths and injection of malaria germs which produce fever in the body. Until now it has been difficult to produce the desired amount of fever in the body, and in the case of malaria injections, after the original condition, the patient must be cured of malaria. This new apparatus overcomes these objections and provides a practical means of using the fever treatment. The new apparatus, for the immediate future, is intended to be used only in scientific investigations, not to be sold to individuals, but loaned to competent research groups for further study.

Combined Local and Universal Light Treatment in Tuberculosis of Skin

Reyn states that at the Finsen Institute in Copenhagen all forms of tuberculosis of the skin are now treated by local and universal irradiation. Less time is required, the results are better, and recurrences are rarer with this form of treatment than with local light treatment alone—*J. A. M. A.*

Ultraviolet Irradiation in Erysipelas in Nurslings

Becker calls attention to the fact that the mortality in erysipelas is inversely proportional to the age of the patient and heretofore has been extremely high in nurslings. In eight infants (aged 18 days, 20 days, 3 weeks, 6 weeks, 10 weeks, 6½ months, 9 months, and 12 months) with erysipelas treated by means of ultraviolet irradiation with one and one-half times the individual erythema dose only one death occurred and that was in an infant (aged 20 days), in whom erysipelas developed following an operation for umbilical hernia and who died from septic thrombosis, peritonitis, and

bronchopneumonia. In some of the patients who recovered the erysipelas was of the most malignant form. —*J. A. M. A.*

Postgraduate Week of Physical Therapy

Announcement is made of *a postgraduate week of physical therapy* in conjunction with the ninth annual scientific session of the American Congress of Physical Therapy, to be conducted September 8 to 12, inclusive, 1930, at the New Hotel Jefferson, St. Louis, Mo.

An intensive postgraduate week of physical therapy is promised. Elaborate plans have been perfected for teaching, demonstrations, and clinics. The physician who is interested in physical therapeutics and who has not had any instruction in the work will find the lectures on the fundamentals a sound basic means for further study. The more experienced, on the other hand, will gain considerably from the advanced expositions on light, heat, electricity, massage, and all the other physical agents utilized in practice. Every phase of physical therapy will be covered. The subjects will be general and specific and so varied as to appeal to both the general practitioner and the specialist.

Although a week is a rather short period for postgraduate teaching, the systematic arrangement of the program makes it possible for the physician to attend only those sessions in which he is vitally interested. Sectional gatherings will prevail in medicine, surgery, and eye, ear, nose, and throat. Several of the afternoons and evenings will be devoted to addresses by prominent guests. There will be symposia on "Education and Teaching of Physical Therapeutics" and on "The Relation of the Physician and the Technician in Office and Hospital Practice." New features in the conduct of clinics and demonstrations will be observed. Full information and details may be obtained from the *Executive Secretary,* American Congress of Physical Therapy, Suite 716, 30 N. Michigan Avenue, Chicago, Ill.

HOSPITAL ACTIVITIES

The Patient's Record—*Continued*

The *treatment record* constitutes the physician's orders. The sheet is ruled longitudinally in order to have two columns, one for medication and one for diet. There should be separate columns for each, to show the date begun, and the date discontinued.

We cannot urge too strongly the need for writing in ink, legibly and intelligently, all orders on the treatment sheet. It should be borne in mind that these orders are to be read and interpreted by nurses, undergraduate or graduate. The physician should not take for granted that the nurse will know what he wishes done. The orders should be explicit. While verbal orders are accepted, the written order should be made at the earliest moment. All orders should be initialed in order to fix responsibility.

We would recommend that the official U. S. P. name of drugs be used, rather than synonyms or popular names for them. We condemn the use of chemical formulas in writing for a drug, for every reason. Nurses receive courses of lectures in chemistry, materia medica, and therapeutics, but in order to reduce to a minimum or, better still, obviate mistakes, it will be best to write for drugs in their official names. The dosage should be plainly written, too.

We would stress the advisability of adhering to the U. S. P., and the National Formulary. A hospital should not be expected to provide nonofficial preparations. An up-to-date practitioner should not lend himself to the use of unethical preparations. It is unfair to his patient, and an insult to his intelligence.

Shotgun prescriptions should not be tolerated. Never write for two drugs if one will suffice, nor for three drugs if two will do. Be very careful as to incompatibilities, as physicians are very careless in this regard. Liquid preparations should be made as palatable as possible, especially when prescribing for children or esthetic women.

When orders are written it is naturally to be supposed that they will be carried out. Sometimes they are not, but according to the nurse's record they are. A nurse willfully misrepresenting should be duly disciplined.

The question of writing orders in advance, anticipating one or two days, has provoked much discussion. The general feeling is against it, even though it may be for routine procedures, and with the understanding that if the patient is not doing well, that the nurse will not follow the routine orders, but call the chief or intern. The argument is that this leaves too much to the discretion of the nurse. Since the intern makes rounds at least night and morning, it should be unnecessary to enter orders for periods longer than is anticipated by these regular rounds. But, the intern and chief should anticipate within reason. When an intern makes his rounds at night he should anticipate what procedures will be in order the next morning before he will make rounds on that particular floor. Conditions may be such that he may not reach the floor until noon, then a whole morning is wasted. This applies particularly to enemas and douches. It is far more satisfactory to have these procedures out of the way the first thing in the morning.

The diet needed from day to day should be specified for each patient. Chiefs are not apt to do this, and interns are prone not to follow also, but trust to the nurses observing routine. Special diets are to be properly requested. Too frequently the physician is not competent to scientifically order a certain special dietary, for instance for diabetes. It is not unusual to see the order blanketed by specifying diabetic diet, which may or may not be intelligent. It would be distinctly in order, if a special diet is necessary, for the physician who knows less to have conferences with the dietitian, who knows more. In this way the best interest of the patient will be served.

When the patient is discharged, competent advice should be given as to observance of diet after the patient reaches home. Many patients would do better if properly advised. They must needs be guided if a special dietary is in order. Then, too, the social status of the patient should be considered, as to ability to purchase food stuff, whether living at home, or in a boarding house, or obtaining meals at restaurants. We are apt to be thoughtless about the method of living of our patients.

It is a universally observed custom, that when an order is written on a chart, to fold back the record exposing the treatment sheet. This immediately calls the attention of the nurse to the treatment record.

Hot Meals Service.—From a huge, white-tiled kitchen in the basement, the maximum of 320 patients in the new private pavilion of the Toronto General Hospital, Canada, can be served, each with a selected meal, in about thirty minutes. This intricate problem of serving individual meals three times a day to each room of the hospital is accomplished by an amazing combination of human and mechanical efficiency. From

the time piping hot food is placed on a tray to the time that tray reaches the farthest room on the eighth story, it has been estimated that three minutes and twelve seconds have elapsed. The uncanny mechanical distributing system by which this is achieved is probably without parallel in any institution on the continent. Trays are "set up" in the roomy refrigerator rooms with all the required cold items and with an ingenious signal card which, by a system of color and letter code, indicates the selections the patient has made. Then the racks are wheeled to where a sanitary rubber belt moves over an aluminum road-bed flanked along its length by a steam table. From the moment the trays are placed on one end of the moving belt until they have traveled the length of the serving tables, have been drawn by mechanical fingers into a rapid "lift," and have reached the designated floor, they are not touched by human hands. As servers along the steam table add the various hot items to the tray, particular precautions are taken to conserve heat. Not only is the food placed on a hot plate, but that plate in turn is placed on another hotter one especially designed to retain its heat. By the same route the empty trays are later returned to the kitchen for the attention of the huge mechanical dishwashers.—*The Toronto Evening Telegraph.*

Hospital Fires.—After questioning witnesses of the fire at Kings County Hospital in April, Dr. J. G. William Greeff, Commissioner of Hospitals, said the institution's fire-alarm system had functioned perfectly. An orderly had asserted that the system failed to work when he turned in an alarm.

In his anxiety to get the alarm in to the Fire Department, an employee snatched the alarm box loose from the wall. Fear that it may have failed to function caused another alarm to be sent from a Fire Department box outside the building. The first one, however, registered in the main building of the hospital and in a very few minutes the fire apparatus was there with the police emergency trucks. There were no serious results of the fire, which started, presumably from a cigarette, on the top floor of a three-story brick building used to house orderlies. Dr. William Curry, assistant superintendent of the hospital, said he had arranged with the Brooklyn police that four police emergency crews should be sent with the firemen whenever a fire alarm came from the hospital. The police trucks responded for the first time under this plan.

Where We Look for Good Workers.—Under this title appears an article in *Nation's Business,* for May, which states that the hospital is proving a worthy source of labor supply for a chain hotel organization. It appears that there are a surprising number of patients who do not have jobs to return to when they recover. Many of these convalescent patients can be placed in positions when hospital superintendents are willing to coöperate.

Hospital on Wheels.—The Canadian National Railway Company has fitted up three coaches as miniature hospitals with the latest in emergency equipment and with theaters for demonstrations. This is the outgrowth of plans established by a special railway council of the St. John's Ambulance Association in order to supply first aid instruction among employees of the Canadian National Railway Company. Thirty-five thousand employees of this company have taken certificates of proficiency in first aid work. This improvised hospital will be used primarily in sections of Canada in which the opportunity for first aid instruction is limited.

National Hospital Day.—On May 12, President Hoover issued a proclamation calling upon the American people to endorse National Hospital Day, which is to be observed in the 7000 hospitals in the United States and in the 1000 hospitals in Canada. A memorandum was presented to President Hoover by the representatives of the committee, which set forth data regarding hospitals in the United States. Twelve million patients are treated annually in hospitals. Of this number, one in ten would die without hospital care. This represents a saving of 1,200,000 lives. The daily average of patients in hospitals is 500,000. There are nearly 800,000 beds. The cost of operating the 7000 hospitals in the United States is $1,000,000,000. The daily average costs of these hospitals is $3,000,000. A total of $500,000,000 is spent annually for new buildings. Two thousand nursing schools graduate 20,000 nurses. To care for these 500,000 patients, 500,000 employees are needed. The valuation of the hospitals in the United States is over $4,000,000,000, or three times the assessed valuation of the real estate of Chicago.

MEDICOLEGAL NOTES

Compensation for Loss of Teeth and Total Disability to Eyes.—The Supreme Court of Utah upheld the action of the state industrial commission in sustaining an award of compensation to a sugar-company workman in deciding that disfigurement through loss of one front tooth and the fracture of another is likely to decrease the victim's earning power, even though he was not disabled for work. Also the attempt of the U. S. Smelting, Refining & Mining Co., to have an award of the Utah industrial commission set aside upon the finding of total disability to both eyes, met with failure.

License Revoked.—At a recent meeting in Harrisburg, the State Board of Medical Education and Licensure revoked the license to practice medicine of Dr. Harvey M. Griggs who had been found guilty in the Philadelphia courts of having committed criminal abortion, on two counts. On January 14, Dr. Griggs was sentenced to a term of from five to ten years in the county prison.

Act to Enforce Drinking Cup Order.—According to Dr. T. B. Beatty, health commissioner, a ruling of the Utah board of health to require the use of paper cups by soft drink dispensers and a ruling by the state agricultural board requiring all restaurants to sterilize by boiling all drinking receptacles or provide a cup that may be used once only, will be taken to the Supreme Court of Utah. A district court had ruled a demurrer in favor of a defendant who had resisted the ruling, was arrested, and found guilty in a justice court.

Court Upholds Power of Officials.—The District of Columbia Court of Appeals, on May 5, upheld the authority of the Secretary of Agriculture and the Secretary of the Treasury to determine if certain crude ergot offered for importation into this country is adulterated or misbranded within the meaning of the Federal Food and Drugs Act. The Court of Appeals affirmed the action of the District Supreme Court which had dismissed an injunction proceeding brought by Howard Ambruster, a New York importer of ergot, to prevent the officials from admitting into the country crude ergot of rye which he alleges was illegal and unfit for use, and which would be in competition with importations made by him. The court found that officials were vested with authority to pass upon the admissibility of the importations complained of and that the bill

failed to allege facts upon which it could be inferred that the action of the officials in regard to the article involved was capricious, arbitrary, or in excess of their lawful powers under the statute.

New York Upholds Validity of Milk License Law.—The law governing the operation of milk gathering stations was recently upheld by the Court of Appeals of New York. The statute requires the licensing of all persons or corporations operating establishments at which milk or cream is received or purchased from producers for sale, resale, or manufacture. It also empowers the commissioner of agriculture upon default of payment of any indebtedness for such purchases, to take action on the licensee's bond.

Barbers Act of North Carolina Sustained.—The North Carolina barbers act providing for the registration of barbers, the regulation and inspection of barber shops, and the revocation of certificates of registration has been held valid by the supreme court of the state. The enactment of the statute the court declared, was a valid exercise of the police power.

Waitress Wins $50,000.—A jury before President Judge Harry S. McDevitt in Court of Common Pleas No. 1, Philadelphia, on May 15, awarded a waitress $50,000 damages for alleged permanent injuries received in an automobile accident.

INDUSTRIAL MEDICINE

Adjusting Claim for Injury in Industry.—Compensation legislation is based upon the fundamental thought that accidents are an inevitable result of production, the cost of which is measured in money and in human sacrifice, and the two contributors are entitled to a fair return; namely the man who invests his money and the man who loses life or limb in the process of production. Many experiments have been tried and many theories have received legislative sanction. In West Virginia, plans have been made for a survey of the industries insured in the Workman's Compensation Fund preparatory to changes in the classifications of the rate schedules. In New Jersey, every year the insurance carriers file detailed reports showing the pay rolls and premiums as audited under all policies that expired during the preceding year. Losses are shown separately for each nature of injury, such as fatal, permanent, partial disability, temporary disability, medical cost, etc., for each classification in the rate manual. For the more serious cases involving payments over a long period or including a permanent disability, an individual accident report is filed which gives considerable detail concerning the circumstances of the accident and the make-up of the record. On July 1, the premium rates for New Jersey will be increased thirteen per cent. In Illinois, there are eleven arbitrators who handle Workman's Compensation cases; six of them are located in Chicago, where hearings are held every Saturday. The other five arbitrators hold hearings at various places throughout the state, monthly hearings being held in large industrial centers, and hearings as occasion demands in the smaller cities and towns. The awards are based upon facts, and legal obstruction is so resisted that the claimant may not become a victim of that viscious system called the law's delay. It is not only the financial need of the claimant that makes quick hearings necessary, but delay gives him more time to brood over his troubles and become neurotic.

March Fatalities Decrease in Pennsylvania.—A further downward trend in the number of industrial accidents in Pennsylvania during March was noted in the monthly summary made public by the Department of Labor and Industry. There were 119 fatal and 12,089 nonfatal accidents in Pennsylvania industry during March, as compared with 195 fatal and 13,712 nonfatal for the same month of 1929. Decreases reported in March for both classes of industrial accidents were the largest reductions in many months. The total number of fatalities for the month was the smallest monthly record since August, 1922, when the anthracite mines were nonoperating. The coal mining industry showed the greatest reduction in accidents. Fatalities fell from 82 in February to 55 during March. There was a reduction of 4.4 per cent in the number of nonfatal accidents. The Workmen's Compensation Bureau record shows 459 fatal accidents in the first quarter of this year, while a year ago the total was 493. Transportation and coal mining report decreases in this respect, while general industrial shows a slight increase for the quarter. Compensation agreements for the payment of $1,570,629 were approved in March by the Board.

Avoid Mine Blasts During Past Year.—One year and more has elapsed since a gas or dust explosion resulting in death occurred in Pennsylvania bituminous mines. The absence of a single serious accident in these mines of the State since the disaster at the Kinloch mine of the Valley Camp Coal Company at Parnassus in March, 1929, which claimed forty-six lives is only the third time within the past fifteen years that such a condition prevailed. Anthracite mines because of the light volatile nature of hard coal are not troubled with such serious explosions. Walter H. Glasgow, Secretary of Mines, is hopeful the "accident vacation" will continue and regards the present quiet spell as an achievement rather than just good fortune. He attributes the lack of explosions to increased safety supervision of the mine inspectors, coupled with greater coöperation on the part of operators to make the mines as safe as possible, and greater interest among miners about their own safety.

Physical Examinations for Confectioner's Employees.—In New York state a large and well-known firm of confectioners has devoted a recent issue of its house organ to the subject of health. The most important feature of the publication is a summary of the results of the first annual physical examination of all employees. The need for such examinations was conclusively proved by the fact that only four per cent of the women and nine per cent of the men were found free from defects which affect health. Some of the significant defects revealed were hernia, and abnormalities of the heart and thyroid. The percentage of perfect condition was noticeably low in persons above the age of forty years. A large proportion of the ailments encountered in that group were due to conditions that had been present for years and which could have been avoided, or at least ameliorated, through proper care earlier in life.

Clinic for Domestics.—In Havana, Cuba, the department of health has instituted a clinic for the examination of servants and nurses. All domestic servants must be vaccinated against typhoid. The clinic will make examinations for tuberculosis, diseases of the skin and blood, and intestinal parasites, and will issue a certificate of good health which may be presented on applying for a position.

The secret of health is cleanliness inside and out. Clean lungs, clean blood, clean thinking prolong life and fight disease.—*Cleanliness Journal.*

Tuberculosis Abstracts

A Review for Physicians

PREPARED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Published through the coöperation of the Pennsylvania Tuberculosis Society and the Medical Society of the State of Pennsylvania

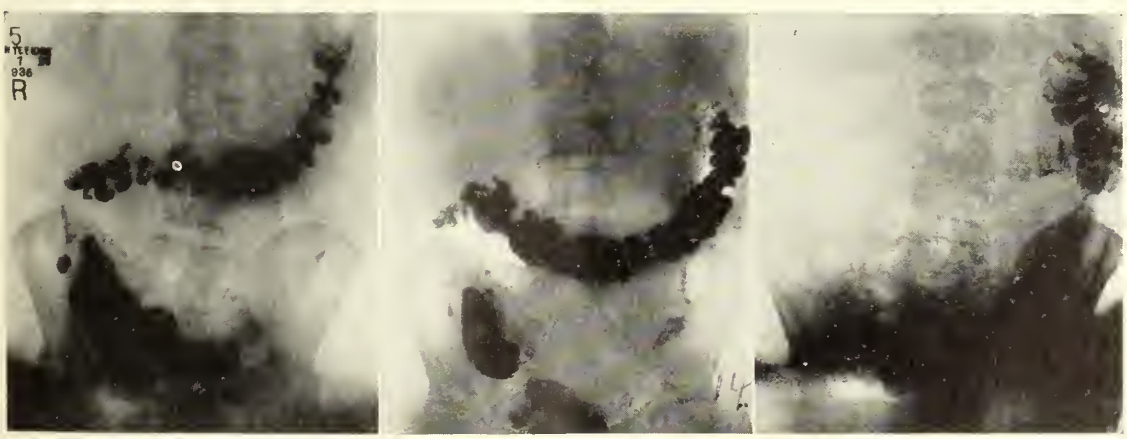
TUBERCULOUS ulceration of the intestines is a common complication of pulmonary tuberculosis. It is probably a terminal phenomenon in the majority of cases of chronic phthisis. A review of the literature, contributed by experienced clinicians, seems to indicate that in from 50 to 75 per cent of the cases the diagnosis of intestinal involvement, in cases of pulmonary tuberculosis, is missed. The reason for this is that nearly all symptoms and signs, including the roentgenologic findings usually considered diagnostic, are highly unreliable. In a series of 199 necropsies performed in Montefiore Hospital in New York, and reported by M. Maxim Steinbach, about 63 per cent showed more or less extensive involvement of the intestines. Of these, not more than 38.6 per cent were diagnosed during the life of the patient though careful watch for the complication was constantly maintained. Abstracts from Dr. Steinbach's report and comment follow:

Intestinal Tuberculosis

While it is possible for the intestine to become involved in a generalized tuberculous infection, in most instances the condition is secondary to pulmonary tuberculosis, and is caused by the swallowing of tuberculous sputum or by hematogenous deposit. The earliest and most usual distribution of lesions is in the region of the ileocecal valve. Other portions of the bowel may become involved later, though tuberculosis of the stomach is exceedingly rare. Common symptoms and signs are diarrhea, constipation, cramp, and tenderness. Sometimes a mass may be felt in the ileocecal region. In general, the findings, while suggestive, are not sufficiently clear cut to warrant an exact diagnosis.

Stierlin's Technic

Stierlin in 1911 described roentgen-ray findings which he believed to be definitely diagnostic of intestinal tuberculosis. He gave two glasses of a liquid bismuth meal and took roentgenographs after 6, 8, and 24 hours. In tuberculous



5 hours: barium in terminal ileum; colon filled; cecum empty.

9 hours: defective filling of cecocolon.

24 hours: barium in splenic flexure and rectum.

involvement of the intestine, the cecum and ascending colon revealed no shadows whereas the terminal ileum and transverse colon were filled. The explanation he gave for this is that as the result of the ulceration in the ileocecal region, irritability and motility are increased and the bismuth is quickly passed along. In some cases, Stierlin found a partially filled portion of the colon with fine marbling or long-drawn-out shadows which he attributed to the retention of bismuth by the ulcerations. Studies made subsequently by others discount somewhat the reliability of Stierlin's sign, as it may occur in any ulcerative or indurative changes in the cecum, which Stierlin himself admitted. On the other hand, the sign is lacking very often in cases of tuberculosis in that region of the intestine.

Trudeau Studies

Brown and Sampson applied Stierlin's technic and in an early publication reported 39 patients diagnosed by the roentgenograph, of whom 38 were corroborated by surgical exploration of the abdomen. In a later monograph on this subject, published in 1926, they state:

Since 1918, 2595 patients have been studied in the roentgen ray department at Trudeau, in regard to the presence or absence of intestinal tuberculosis. In all these patients, a diagnosis of pulmonary tuberculosis had caused them to seek treatment. In 867 patients, a positive diagnosis was made; and in 1726, tuberculous colitis was excluded. Of the negative group, 46 went to operation or autopsy, and in 44 tuberculous colitis was absent, while in 2 it was present. In the 62 patients diagnosed as positive by the roentgen ray method who went to operation or autopsy, all had tuberculous colitis.

Montefiore Studies

Encouraged by the work of Brown and Sampson, Steinbach studied, during the past six years, 273 cases at Montefiore Hospital, of which 71 cases came to necropsy. Four cases were excluded because of faulty technic, leaving 67 cases in which it was possible to correlate the roentgen findings with those of necropsy. Care was taken to excise, wash, and inspect the intestinal mucosa as lesions are often confined to the mucosa and submucosa and are not visible through the serosa. Often the ulcerations are found only after microscopic search. The 67 cases thus correlated are divided into two groups: Group I embracing those in which roentgen and necropsy findings were in agreement, and Group II those in which they did not agree. The results are tabulated as follows:

Group I. Thirty-two cases of agreement between roentgen and necropsy findings

Roentgen and necropsy findings both positive	20	cases
Roentgen suggestively positive, necropsy positive	5	"
Roentgen negative, necropsy negative	7	"
	32	"

Group II. Thirty-five cases of disagreement between roentgen and necropsy findings

Roentgen positive, necropsy negative	3	cases
Roentgen negative, necropsy positive	18	"
Roentgen indefinite, necropsy positive	6	"
Roentgen indefinite, necropsy negative	4	"
Roentgen negative, necropsy showing lesions in small intestine only	4	"
Total	35	"

Why Findings Disagree

Special investigations were made to discover why in certain cases the roentgen and necropsy findings did not agree. After citing specifically several case histories, the author concludes that "these cases illustrate that defect in filling of cecum and ascending colon, associated with hypermotility, is not always pathognomonic of tuberculous colitis, but may be present in other conditions of the large and small intestines in which there is irritability resulting in diarrhea. Fishberg enumerates the commonest causes of diarrhea in tuberculous patients as follows: (1) intestinal ulceration, (2) intestinal catarrh, (3) dietetic errors, (4) amyloid degeneration, (5) swallowing of sputum, and (6) toxemia. It is easy to see that any one of these above enumerated causes may produce the classical clinical signs of tuberculous enteritis without the presence of intestinal ulceration."

Conversely he finds that, "absence of hypermotility and defect in filling does not exclude tuberculous colitis or enteritis or a combination of the two."

Conclusions

The final conclusion is that "on the basis of 67 cases of far-advanced pulmonary tuberculosis, studied clinically, roentgenologically, and at autopsy in relation to a diagnosis of tuberculous ulceration of the intestines, we have found that the roentgenologic signs usually considered diagnostic of this condition were highly unreliable in over 52 per cent of our cases."—*Comparative Radiographic and Anatomical Studies of Intestinal Tuberculosis. M. Maxim Steinbach, Am. Rev. Tuberc., January, 1930.*

THE MEDICAL SOCIETY
OF THE
STATE OF PENNSYLVANIA

Officers' Department

WALTER F. DONALDSON, M.D.
Secretary
8063 Jenkins Arcade Bldg.,
Pittsburgh, Pa.

CONTRIBUTIONS TO MEDICAL BENEVOLENCE FUND

The Committee on Medical Benevolence gratefully acknowledge receipt of the following contributions to the Fund:

Woman's Auxiliary to Delaware County Medical Society	$100.00
Woman's Auxiliary to Lackawanna County Medical Society	100.00
Woman's Auxiliary to Lancaster County Medical Society	100.00
Dr. C. R. Farmer, Lancaster County	5.00
A Friend (Allegheny County)	5.00

A CORRECTION

In the May number of the JOURNAL, page 567, under the heading "Payment of 1930 Dues," the Medical Society of Franklin County is recorded as having 53 members, 43 of whom had paid their 1930 State Society dues on April 24. This is an error, since the Franklin County Society has 52 members, all of whom had paid their 1930 dues before April 1.

ORGANIZATION OF PUBLIC RELATIONS COMMITTEE

At a meeting of the Public Relations Committee of our State Society held in Harrisburg, May 13, 1930, Dr. Edward J. G. Beardsley, of Philadelphia, was elected chairman, and Dr. Norbert D. Gannon, of Erie, was elected secretary. At this meeting the following activities for the Committee were recommended and adopted: First, the revision of the periodic health examination blank issued by our State Society with the approval of its Public Relations Committee; second, stimulation of the activities of the various component societies in behalf of county medical society representation on the controlling Boards of the various lay and welfare health agencies in the various counties, that in any way deal with medical or sickness problems; third, revival of the interest of the members of the component societies in toxin-antitoxin immunization against diphtheria, featuring especially the children of preschool age; fourth, enlistment before the meeting of our 1930 House of Delegates of the influences of the component societies in behalf of the proposal to establish a new Psychopathic Hospital in the eastern and in the western ends of the State.

ELEVENTH COUNCILOR DISTRICT MEETING

The annual meeting of the Eleventh Councilor District, Dr. Arthur E. Crow, Trustee and Councilor, was held at the Sunnehanna Country Club, Johnstown, on Thursday, June 12, 1930, beginning with luncheon at 1.30 p. m. Guest speakers on the program included Dr. George W. Crile, of Cleveland, Ohio, who spoke on "Thyroidectomies: Indications, Methods, Complications, End Results"; and Dr. Orlando H. Petty, of Philadelphia, whose subject was "The Management of Some of the Complications of Diabetes."

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to May 15:

ALLEGHENY: *New Members*—Bernard C. Prietsch, 2548 Brownsville Road; Paul L. Jenny, 300 S. Atlantic Ave., Pittsburgh. *Deaths*—Thomas S. Anderson, Pittsburgh (Jeff. Med. Coll. '88), May 1, aged 65; Elmer C. Ritchey, Pittsburgh (Univ. of Pgh. '97), May 2, aged 61.

BEAVER: *New Member*—Emmett S. Burns, Beaver Falls.

CENTER: *New Member*—Oscar E. Henritzy, Port Matilda.

CHESTER: *New Member*—David H. Keller, Pennhurst.

CLARION: *Death*—John B. Miller, Sligo (Jeff. Med. Coll. '01). Apr. 4, aged 57.

CLINTON: *Removal*—George W. Farquhar from Logantown to Le Roy.

Crawford: *New Member*—Floyd G. Wood, Cochranton.

Dauphin: *New Members*—Robert E. Barto, Elizabethville; Lewis G. Crawford, 19 N. 4th St., Harrisburg. *Resignation*—Jesse S. Spangler, Columbus, O.

Delaware: *Death*—Albert L. Usset, Chester (Med. Chi. Phila. '15), May 6, aged 40.

Fayette: *Death*—John J. Mechem, Masontown (Univ. of Pgh. '00), Apr. 10, aged 54.

Franklin: *Removal*—Chester P. Swett from Hamburg to Essex Mt. San., Verona, N. J.

Indiana: *New Members*—Cyril B. Bell, Glen Campbell; William A. Evans, Indiana; James E. Peterman, Cherry Tree.

Jefferson: *New Member*—John W. Spillman, Sykesville. *Removal*—John M. Kuhns from Russellton to Dalmatia. *Death*—Parker P. Horner, Conifer (Univ. of Louisville '94), Apr. 13, aged 63.

Lackawanna: *New Members*—William J. Bassett, 224 Bridge St., Jessup; Paul C. Lannon, 404 Main St., Archbald. *Removal*—Albert G. deQuevedo from Nicholson to U. S. V. Hosp., Boise, Idaho. *Death*—William A. Ryan, Scranton (Med. Chi. Phila. '11), Apr. 23, aged 45.

Lancaster: *Death*—Jacob Miller Shartle, Lancaster (Jeff. Med. Coll. '84), Apr. 18.

Luzerne: *Removal*—Stephen Stevens from Nanticoke to 1291 Wyoming Ave., Pittston.

Mercer: *New Member*—Abram M. Zucker, 142 W. State St., Sharon.

Montgomery: *New Member*—Herbert T. Moyer, Lansdale.

Montour: *Removal*—Charles L. Johnston from Numidia to 238 Main St., Catawissa.

Northampton: *New Member*—Charles Kutner, 1856 Freemansburg Ave., Easton. *Removal*—Waldemar T. Fedko from Pottsville to 29 Biddle St., Gordon.

Philadelphia: *New Members*—Frank D. Baumann, 640 E. Indiana Ave., Jacob Glauser, 947 N. 5th St., William S. Magee, 3646 Chestnut St., Winifred B. Stewart, 1820 Pine St., Clarence A. Whitcomb, 5541 Greene St., Philadelphia. *Resignation*—W. Kenneth Knotts, Federalsburg, Md. *Removal*—S. A. Bonnaffon from Philadelphia to 1206 N. Rodney St., Wilmington, Del.; Frederick W. Ninde from Philadelphia to 79 Haven Ave., New York City. *Deaths*—D. Pellman Boyer (Univ. of Pa. '92), Mar. 23; Dudley T. Cooke (Univ. of Pa. '85), Mar. 1, aged 69; Leo N. Gartman (Jeff. Med. Coll. '96), Mar. 30, aged 66; J. Edward Wallis (Univ. of Pa. '84), Mar. 27, aged 72.

Somerset: *Removal*—Charles C. Cooner from Shanksville to Bedford.

Westmoreland: *New Member*—Jackson W. Allison, Scottdale.

York: *New Member*—Harold O. Belknap, 601 W. Market St., York.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since April 18. Figures in first column indicate county society numbers; second column, State Society numbers:

1930				
Apr. 18	Lackawanna	227-228	7419-7420	$15.00
	Perry	13	7421	7.50
21	Clearfield	58-61	7422-7425	30.00
	Jefferson	45-46	7426-7427	15.00
	Bucks	62	7428	7.50
	Lebanon	29-30	7429-7430	15.00
22	Mercer	72	7431	7.50
	Lycoming	111	7432	7.50
	Armstrong	47	7433	7.50
	Delaware	107	7434	7.50
1930				
Apr. 24	Northampton	130-132	7435-7437	$22.50
	Philadelphia	1971-2030	7438-7497	450.00
25	Lebanon	31	7498	7.50
	Lackawanna	229	7499	7.50
	Washington	126	7500	7.50
	Washington	127	7501	7.50
	Crawford	24-33	7502-7511	75.00
	Lawrence	59-61	7512-7514	22.50
28	Monroe	20	7515	7.50
	Beaver	86-89	7516-7519	30.00
29	Tioga	22	7520	7.50
30	Mifflin	21	7521	7.50
	Washington	128	7522	7.50
	Fayette	121-122	7523-7524	15.00
	Wayne	27-28	7525-7526	15.00
May 2	Somerset	36	7527	7.50
	Lackawanna	230	7528	7.50
	Bradford	37-40	7529-7532	30.00
	McKean	37	7533	7.50
3	Dauphin	173-175	7534-7536	22.50
	Lancaster	154	7537	7.50
	Luzerne	283-290	7538-7545	60.00
	Union	14	7546	7.50
5	Beaver	90-91	7547-7548	15.00
6	York	129	7549	7.50
8	Tioga	23	7550	7.50
	Cumberland	34	7551	7.50
9	Erie	133-151	7552-7570	142.50
10	Beaver	92	7571	7.50
	Northumberland	67	7572	7.50
	Delaware	108-109	7573-7574	15.00
12	Montgomery	171	7575	7.50
	Allegheny	1288-1296	7576-7584	67.50
13	Indiana	55-58	7585-7588	30.00
14	Chester	77-78	7589-7590	15.00
15	Westmoreland	150-165	7591-7606	120.00
	Mifflin	22	7607	7.50
	Chester	79	7608	7.50

COMMITTEE ON SCIENTIFIC WORK

C. Howard Marcy, M.D., *Chairman*
Pittsburgh, Pa.

PROGRAM OF THE EYE, EAR, NOSE, AND THROAT SECTION

The Eye, Ear, Nose, and Throat Program is one of more than ordinary interest this year.

The professional standing of the various contributors is of exceptionally high caliber and the subjects chosen for presentation are of prime importance to all of us. If one may judge from the titles and abstracts of a number of papers to be presented, this should be a very profitable meeting.

Our guests, Dr. Arnold Knapp of New York City, Dr. Joseph C. Beck of Chicago, and Dr. William E. Bruner of Cleveland, have a world-wide reputation, and have made valuable contributions to the literature of our profession.

In addition to the above program there will be a scientific exhibit from the Army and Navy Museum relating to eye conditions. This exhibit is in great demand at scientific meetings and it will, without doubt, be very instructive and interesting. Begin to plan now to attend this meeting. Do not miss it.

COMMITTEE ON PUBLICITY

J. D. KEIPER, M.D., *Chairman*
Johnstown, Pa.

ATTENTION OF GOLFERS

There is a very pleasant surprise in store for the golfing contingent that expects to be in attendance at the State Convention at Johnstown during October.

There is not a finer nor more beautiful course in the State of Pennsylvania. It is known as the Sunnehanna Country Club. The name is an old Indian one, the red man's name for Stonycreek that flows through the city. The large, perfectly-kept greens and rolling fairways attract the golfers for miles and its scenic beauty is not surpassed anywhere. Hundreds of trees and considerable shrubbery have been planted, which add greatly to the attractiveness of the grounds.

The course is not an exceedingly difficult one, though it is a good test of golf and offers every shot to the student of the old Scottish pastime.

JOSEPH P. REPLOGLE, M.D., *Chairman.*
Local Golf Committee.

COMMITTEE ON HOTELS

HENRY W. SALUS, M.D., *Chairman*
420 Franklin Street
Johnstown, Pa.

HOTEL ACCOMMODATIONS AND LUNCHEONS

Arrangements have just been completed with the management of the Fort Stanwix Hotel Company at Johnstown that the spacious ballroom on the seventh floor of the hotel will be opened as an additional dining room during the Eightieth Annual Session.

This ballroom, as fully equipped with diet kitchens, steam tables, dish-washing apparatus, refrigeration, and other utilities as is the main dining room on the first floor, will permit the serving of as many guests as the original dining room.

It is estimated that between the hours of twelve and two p. m., eight hundred persons can be easily served in both these dining halls. If this number of persons can be served luncheon during the rush hours of the day, at least four hundred more should be able to be served during the evening dinner. This arrangement assures every one that he may obtain food when he wishes it, and permits a better centralization of all activities.

Those who have not sent in their requests for reservations are urged to do so at once, or not to expect the very best of accommodations at the very last moment. It should be remembered that even the larger cities, such as Philadelphia and Pittsburgh, find it very difficult to conveniently house and serve one thousand or more guests at conventions, so some thought should be given to the hardship encountered in the smaller cities. If you have not already done so, do not delay in writing for hotel reservations.

County Society Reports

ALLEGHENY—APRIL

A regular meeting was held on April 8, in the Carnegie Lecture Hall, and was followed by the annual dinner and election of officers in the Hotel Schenley.

The first paper was that of Dr. James O. Wallace, who discussed "Congenital Dislocation of the Hip." Dr. J. A. Hagemann, in a reflective mood, spoke of "The Passing of the Country Doctor." He paid a well-deserved tribute to those men of the profession who knew so well the art of medical practice. Dr. Robert L. Anderson discussed "Ureteral Obstructions in Kidney Infections." "A Study of Human Gullibility," was the subject of an entertaining talk by Dr. Theodore Diller. Dr. Henry T. Price reviewed the subject of "Meningitis in Infancy."

In addition to the scientific program, Dr. Paul R. Correll, chairman of the Public Health Legislative Committee, discussed the political situation existing throughout the State with regard to its possible effect upon future public health legislation. He declared that the political leaders of the State are manifesting a deep interest in the attitude of physicians upon public health legislation and the administration of the Medical Practice Act. The meeting was attended by about one hundred and fifteen physicians.

At the annual dinner, the society president, Dr. Thomas G. Greig, was the toastmaster. President-elect, Dr. Ross V. Patterson, of the State Society, was in attendance. Dr. Harry M. Hall, of Wheeling, W. Va., made a strong appeal for less personal jealousy among members of the medical profession and greater coöperative effort against the common enemies of medical practice. As examples of these he cited contract practice and free dispensary abuses.

The following officers were elected for the year 1930-1931: president, Alexander H. Colwell; first vice-president, George W. Smeltz; vice-presidents, Thomas H. Manley, Jr., William A. Forster, Merle R. Hoon, John M. Conway, and Harry A. Klee; secretary, Frederick M. Jacob; treasurer, George A. Holliday; and directors, Hugh E. McGuire, Russell R. Jones, Ernest W. Willetts, Joseph H. Barach, and W. W. G. Maclauchlan; judicial board, John M. Thorne; and district censor, David P. McCune.

A. B. THOMAS, M.D., *Reporter.*

CRAWFORD—MAY

The third annual clinic of the Spencer Hospital and staff was held at Meadville on May 10. Dr. H. C. Winslow performed two prostatectomies and two pelvic operations. Dr. M. T. Leary performed a tonsillectomy, using local anesthesia.

Dr. Bauer read a paper on a case of blackwater fever, a condition caused by a malarial infection, in a young

woman, discussing the symptoms and the results of treatment. Dr. Luther J. King read a paper on hypertension and discussed the cases as they appear in the office of the general practitioner; why the patient with hypertension comes to the doctor; and the results of routine treatment. Dr. Herman H. Walker's paper was on pneumonia, a discussion of forty-six cases which he treated during the past winter. No patients died and there were very few complications. He recommends a high carbohydrate diet along with symptomatic treatment. Dr. Joseph Connor discussed the technic and results obtained by intravenous injection treatment for varicose veins and ulcers of the lower extremity. He spoke of the advantages of invert sugar solutions over sodium salicylate, and stressed the fact that there is no danger in the treatment. Dr. W. H. Brennan read a paper on spinal anesthesia, discussing the various preparations, method of injections, and the advantages. Dr. Gingold's paper, "Gastric Ulcer, Diagnosis and Prognosis," stressed that the roentgenologist's findings should be considered equally with the clinical and physical findings. Dr. Winslow discussed the selection of the proper anesthetic for the individual, since some patients do well with one anesthetic, while others should be treated differently. He showed slides made from charts of the blood pressure and pulse rates.

Following a turkey dinner given to the forty-four physicians, by the Sisters, Dr. Ray Wesley Scott, professor of clinical medicine, Western Reserve University, Cleveland, gave a talk on angina pectoris and coronary thrombosis, in which he brought out many interesting points on coronary disease and the anatomy of the circulation of the heart. He showed slides of injected hearts, proving that the coronary arteries are not end arteries but that there is a very extensive anastomosis. He also showed slides that indicated the results of thrombosis of the coronary artery and the effect in the wall of the left ventricle.

LUTHER J. KING, M.D., *Reporter.*

DAUPHIN—MAY

The May meeting was held in the Harrisburg Academy of Medicine Building, Tuesday, May 6. About fifty members and several guests were present.

It was announced that the Tri-County Medical Convention will be held in Harrisburg this year at the Harrisburg Country Club. District Councilor, Dr. Clarence R. Phillips, advised that invitations will be extended to the members of all the societies in the district: Cumberland, York, Adams, and Franklin, in addition to the original three counties: Lancaster, Lebanon, and Dauphin.

Dr. Clarence R. Phillips was the speaker of the evening and his subject was "Nephritis." Dr. Phillips said: "This disease is a progressive degenerative lesion of the renal parenchyma, the interstitial tissue, and the renal vascular system. Only a few words will be said about acute nephritis, and we will not consider subacute nephritis—a too fine division of the subject. *Acute* nephritis, following fevers, very frequently entirely disappears, as it does if caused by exposure to cold; also if produced by poisons such as cantharides. Clinically the course is rapid, the puffiness of the face or the anasarca may appear in a very few days. Death may come promptly and often without definite evidence of the lesion. The *chronic* form has two well-known divisions: (1) with edema, and (2) without edema, but with high blood pressure. Theories as to the cause of the edema have been many. One is that it is due to a change in the serum protein—a lowering of the serum protein. Barker and Kirk seem to have demonstrated this in a series of experiments on dogs in the Peter Bent Brigham Hospital in Boston. Chronic nephritis without edema is characterized by slow progress, covering frequently many years; a blood pressure of from 200 to 300 mm. of mercury; headache; dizziness. It is a cardiovascular-renal disease and not a simple nephritis. In fact, nephritis is a poor name for any of the forms for it implies or connotes inflammation, whereas degeneration is the real lesion."

MATHEW H. SHERMAN, M.D., *Reporter.*

HUNTINGDON—APRIL

Dr. Harry W. Mitchell, of the State Hospital, Warren, Pa., addressed the meeting, Tuesday, April 22, on "The Medical View of Mental Hygiene." Physicians from adjoining counties, Parent-Teacher Associations, Civic and Service Clubs were especially invited and newspaper publicity given in local newspapers, and judging from the talk and the apparently sustained interest during it, we feel sure the address was worthwhile in helping to spread the facts concerning the mental hygiene movement. The auxiliary members were very helpful in making this meeting a success.

Dr. Henry J. Sommer, Jr., superintendent of the Blair County Hospital, and James W. Herron, superintendent of the Pennsylvania Industrial Reformatory, were present and discussed Dr. Mitchell's address.

Dr. Mitchell emphasized the function of the State Hospital in the broad field of mental hygiene, that it has a duty to perform not to the patients alone but to the families and to the community. He brought out the necessity for employing all medical skill in the treatment of patients; the study of problem children in the schools and the diagnostic facilities which are offered physicians who are willing to send patients to the hospital as voluntary cases for study and report; the opportunity the county hospital has for holding clinics at the hospital and adjacent communities. He discussed the personnel of the boards of trustees or managers of hospitals and said that they should be composed of men and women of ability and standing in their communities. The medical staff should be treated fairly in regard to reasonable compensation and living conditions. The nursing personnel should be well trained and competent which means that necessary training be obtained and that satisfactory living conditions be provided for pupil nurses.

The ideal modern hospital for mental illness should be specially adapted for its many needs; the combined arts of psychiatry, medicine, surgery, and nursing will bring about the highest degree of improvement to body and mind.

Hospital clinics to which patients can be sent by physicians and charitable agencies for diagnosis and advice have proved their worth. School authorities are learning to value the reports of neuropsychiatric examinations, and the courts see the necessity of referring patients to the hospital clinic.

Slowly we are getting somewhere for in this State and other states the following legislation and practice have been adopted: Adoption of laws giving first importance to the medical and humane interests involved; central regulating bodies composed of persons chosen with due regard for the specific knowledge; appointments made that will not be interfered with by political changes; duties well outlined and executed that will insure high standards of medical service throughout the State; ade-

quate provision for the support and classification of the mentally disordered.

John M. Keichline, M.D., *Reporter.*

LYCOMING—FEBRUARY *(in part)*

At the February meeting, Dr. Wilbur E. Turner, of Montgomery, reported the following case of hypernephroma: A man, aged 70 years, was first seen on May 15, 1928, and complained of pain in the left side of the chest in the anterior axillary line about the level of the fifth rib. This pain increased with motion. The history was negative. No physical signs could be elicited except arterial hypertension. Temperature, blood picture, and urinary findings were normal. All efforts to find a cause for the pain were unavailing, and the pain continued as the only symptom until September, when he complained of weakness and slight dyspnea. He was put to bed and the pain in the left side of the chest completely disappeared and did not return. On December 12, 1928, a mass was discovered in the left hypochondrium. This mass was movable, not tender, and the patient was not advised of its presence.

The x-ray report showed a mass obscuring the left kidney shadow and fluid in the left pleural cavity with thickening about the hilus. A diagnosis of left hypernephroma with metastases was made. Fluid was withdrawn from the left pleural cavity and gave immediate relief from the dyspnea. Fluid quickly reaccumulated, however, and during the following nine months it was necessary to aspirate fifty-four times and in amounts ranging from one to four quarts, with a total of 174 quarts of fluid withdrawn.

X-ray treatments were instituted in January, 1929, and the patient improved nicely with a reduction in size of the original tumor and metastatic masses. By April, the patient appeared almost well and the tumor was no longer palpable. In August, myocardial failure appeared and the patient died in September of cardiac exhaustion.

Autopsy findings were myocarditis with pericardial effusion, bilateral pleural effusions, the left lung was atelectatic and showed no evidence of metastases. Mediastinum was negative. No evidence of the original tumor could be found in the abdomen. The left kidney was surrounded by dense fibrous tissue. Sections were removed from the left kidney region and the left lung. The microscopic report was malignancy (hypernephroma) in the lung tissue only.

W. Eugene Delaney, Jr., M.D., *Reporter.*

PHILADELPHIA

April 16, 1930

"Some Contributing Factors to the Degenerative Diseases, with Special Consideration of the Rôle of Dental Infections and Seasonal Tides in Defensive Vitamins." Weston A. Price, D.D.S., M.S., F.A.C.D.

Author's summary of the paper: (1) A review has been made of the past and present outlook of infections in general, with particular consideration of dental focal infections with emphasis upon the lack of progress in either the prevention of dental disease or the satisfactory control of dental infections.

(2) A new view has been suggested, based on the deficiency of nutritional activators, some of which are the known vitamins.

(3) Data have been presented indicating a seasonal tide in the nutrition of cows which is so widespread as to be practically universal, with data pointing to the dependence of the cow upon rapidly growing young grass in the fresh state or the same adequately cured and preserved.

(4) Cycles have been shown to exist in two complete successive years, and part of the third, as a rise and fall in vitamins A and D, particularly the latter, in milk-fat of the dairy cow. This has appeared in several countries, in the northern and southern hemispheres, as a low level for vitamin D (usually very low) for from six to ten months of the year, the rise occurring quite sharply at the time the rapidly growing green grass became available and remaining at a low level chiefly in the winter and spring and a higher level in the summer and early autumn.

(5) Cycles in morbidity and mortality have been reviewed and shown to have marked similarity from year to year as increases in the incidence in the winter and early spring and marked decreases in the summer in areas studied for the north temperate zone.

(6) A comparison of the distribution of these two aspects of variations in vitamins in milk-fat and morbidity and mortality levels has been made and attention called to the remarkable fact that each is, in general, the opposite of the other for most districts studied.

(7) Data have been presented indicating by means of comparative studies of different districts which have revealed that if the vitamin curve varies from the mean of all the districts, the morbidity curves have been found to vary simultaneously and attention has been called to data suggesting the interpretation that the degenerative processes are directly related to disturbances in plant activators.

(8) Clinical data have been presented illustrating the marked reduction or lessening of severity of some of the degenerative processes through the administration of the activators found to be absent in the plant foods which produce the disturbances in the milk-fat vitamins. These have included evidence of a marked reduction in the incidence of dental caries, a checking of progressive decalcification and return of calcification, with union of ununited fracture, and a marked reduction in inflammatory irritation associated in a case of arthritis with evidence of a marked change toward normality.

(9) These data are presented in support of a new view that degenerative diseases, including those of the oral cavity, are in large part related to, if not primarily caused by, a deficiency in a group of activators which are formed in plants and without which human life cannot be maintained in normality, but by the administration of these missing factors it may be possible greatly to improve the sum total of human efficiency, freedom from disease, both from acute infections and from degenerative processes, and obtain a marked increase in physical well-being.

April 23, 1930

The president, Dr. John A. McGlinn, in the chair.

"Tumors, Benign and Malignant, of the Larynx and Lungs." Dr. Chevalier Jackson.—Over ninety per cent of tumors of the larynx are incurable because seen by the laryngologist too late. Every case of hoarseness, of chronic laryngitis, should be suspected as malignant until proved otherwise, for when seen early, eighty-five per cent are curable. Malignancy of the larynx should be distinguished from tuberculosis, syphilis, and benign growths, and after the x-ray, repeated laryngoscopic examinations, and thorough study by the internist. Biopsy should be made, taking a specimen sufficient for accurate study, either through the laryngoscope, bronchoscope, or after section of the larynx. Carcinoma of the lung can often be cured by the x-ray if treated early. Differ-

ential diagnosis should exclude asthma, pus, postinfluenzal suppurative process, hemorrhage, foreign body, and aneurysm. Therefore, the x-ray should always precede bronchoscopy. Motion pictures demonstrated the technic of diagnostic bronchoscopy and implantation of radons in the lung. Slides were shown of cases of pulmonary malignancy—x-rays, specimens, and histologic preparations—and illustrative drawings of malignancy of the larynx were made. In summary, Dr. Jackson said that the bronchoscope is an auxiliary and does not supplant other methods of diagnosis. Treatment of these patients demands the combined efforts of internist, roentgenologist, and bronchoscopist.

"Efficiency of Modern Methods in Treatment of Malignant Diseases." Dr. James Ewing, of New York City, agreed with Dr. Jackson upon the necessity for serious diagnosis of these patients and careful biopsy, with sufficient specimen. He claimed that it is impossible to estimate the efficiency of cancer service in the United States, because it includes all grades of treatment from incompetence to the highest skill. Statistics are unreliable, the clinical diagnosis is doubtful, and the histologic diagnosis may not be accurate. We should determine under what conditions successful service is obtained. Autopsy records show that twenty-two per cent of cases in hospitals were unrecognized, antemortem, and that ten per cent of cancer diagnoses made during life were made erroneously. Some years ago, in Germany, a report was published giving fifty per cent as the cancer mortality. A large proportion of cancer cases have good health until near death and the diagnosis should be made provisionally oftener, with confirmation by one or more competent physicians, and if possible, with biopsy. In particular forms, better statistics are obtained. While cancers of the mouth and tongue are accessible and even painful, in as high as sixty-six per cent, diagnoses are not made early, metastases usually being present before the disease is known. Of one hundred and forty-four carcinomas of the testis, forty-two were diagnosed early; of one hundred bone sarcomas, eighteen. Forty per cent of mammary cancer is incorrectly diagnosed by the private physician. The average duration of uterine cancer before diagnosis is twenty-one months and, according to one German series, of five hundred and twenty-eight cases, thirty-two per cent were erroneously diagnosed. It is, therefore, important to consult the right physician early. The results of diagnosis and early treatment of mammary cancer are impressive, as high as forty-eight per cent showing five-year survival; and seventeen per cent, nine years. The average duration of mammary cancer is three and a half years, but with operation, life is lengthened to six years. The efficiency of radical surgery then often rests upon the question of accurate diagnosis. After five years, twelve per cent recur locally and twenty-two per cent show metastases. The diagnosis and estimation of the extent are clinically impossible and whether or not there are metastases is impossible to tell. There is great variance in the rate of growth. Unsuccessful operation shortens life and increases the morbidity and suffering. The result of the surgical treatment of mammary cancer is not favorable. In uterine cancer, we find twenty per cent with five-year cures, an operative mortality of 17.2 per cent; operative cures, 25 per cent; and radiologic cures, 62 per cent. The stage of the disease and the histologic type are impossible to tell, and the adult squamous type gives poor results with the x-ray. Cancer of the body of the uterus, Norris believes to be more malignant than supposed, with about 37.5 per cent five-year operative cures. The bulky cases should be given to the surgeon, and the anaplastic ones to the radiologist. Bonney, the best living operator of these patients, claims 38.7 per cent absolute cures. In gastric carcinoma there is meager success, for there are signs only when the condition is far advanced. One series of 527 cases, reports eight patients alive five years after operation; another, finds none living out of 1000.

Not one per cent of gastric cancer is cured today nor are frequent laparotomies for diagnostic purposes received kindly. The surgical treatment should be limited to the highly skilled. In rectal cancer the operative five-year cures are reported from 35 to 70 per cent by extremely skillful experts. In smaller cities, the operative mortality runs so high as 45 per cent. Of the pathologist, information is required as to the histology, the histogenesis, the radio-resistancy, and the type of cell in the specimen. Growths should be graded by the degree of malignancy and the degree of radiosensitivity. In 60 per cent the diagnosis is easy; in 30 per cent, difficult; in 10 per cent, satisfactory diagnosis is impossible. Much experience is needed and then there will be a certain percentage of error. Tumor registries are being established to gain a higher efficiency of diagnosis and the pathologist should specialize in the tumor field. Clinical examination should be made by specialists with special instruments with careful search for primary growth and metastases. An aplastic carcinoma is best treated by the radiologist. Coöperation between the surgeon, the roentgenologist, and the pathologist is essential and then how much should be attempted in the light of the incurability? Enthusiastic statements regarding the success if diagnosed early are not justified by the facts, for the results of treatment are meager. A rough estimate, made under the best conditions, from the best statistics under the British Ministry of Health, gives 10 per cent of cancer cured for five years, with a possibility, under the best facilities and with wide propaganda, of 30 per cent of cures. In conclusion, then, the subject presents intrinsic difficulties. Cases and treatment should be concentrated and in the hands of skilled physicians. The world-wide movement for cancer institutes should be encouraged.

"Cancer of the Rectum." Dr. Daniel Fisk Jones, Boston, Mass. No operation is of value unless the laity and the physicians are interested in the disease. More interest should be aroused in cancer of the rectum. In the last fifteen years operations have been improved and, of late, results have been more satisfactory, cures now running 25 to 50 per cent, as against 15 to 20 per cent, fifteen years ago. Laymen neglect the early symptoms and the problem here is one of lack of interest rather than difficulty in diagnosis. In Massachusetts, 11,000 die yearly of cancer; 12 per cent of these cancers are in the intestine. While a radical operation is called for, scarcely more than 20 per cent have it, and less than 50 per cent have any operation at all. When symptoms suggestive of cancer of the rectum are given by the patient a digital examination will find it if present. Change in the bowel habit or sensation, and blood in the stool are never to be overlooked. Bleeding means carcinoma until it is excluded and a diagnosis of fissure, hemorrhoids, proctitis, chronic ulcerative colitis, etc., is made. A proctoscopic examination should always be made if there is blood. Pain is rare in cancer of the rectum, discomfort is more usual, though when the growth presses on the sciatic nerve there is pain down the leg. Colicky pain may or may not be present in the lower abdomen and an idea of the amount of obstruction may be had on inquiry as to the amount of gas in the lower abdomen. Constipation is variable, but

change in bowel habit is important. Loss of appetite and weight are late symptoms and the size and shape of the stool are of no value since it depends on the consistency and sphincteric action. Diagnosis can be made by digital and proctoscopic examinations, careful observation being made in the latter both on introduction and withdrawal of the instrument. If there be doubt, a section of the tumor may be removed with a sharp curette. Blood in the proctoscope is usually indicative of cancer. The x-ray is used only after these two examinations for its dependability is doubtful. Part of the lack of interest in carcinoma of the rectum comes through necessity for colostomy. Treatment of cancer of the rectum endeavors to relieve discomfort and aims at and hopes for cure. All patients in whom the local disease can be removed should be given the benefit of operation but the grade of malignancy should be known before hand. The best operation for the patient should be decided after knowing the location and size of the growth and the surgeon should be experienced in the work and should be familiar with radiation. The abdominal-peroneal, one stage operation is the measure of choice, removing the whole length of bowel involved and as much hepatic drainage as possible. The abdominal peroneal operation in two stages should be done on poor risks, establishing a lateral colostomy, then performing the peroneal part in five to ten days. If the growth is high it may be possible to resect the rectum and bring down the sigmoid to the anus, though with this method recurrence is frequent in the pelvis, the sphincter may not function well, a fistula may remain and the stricture should be kept dilated. Radium has been disappointing since it is difficult to destroy the entire growth, there is severe pain and the bladder may become involved. For both mental and physical relief, all patients in reasonable condition should be operated on. Slides illustrating the anatomy and operations discussed, and tables of statistics, were presented.

May 14, 1930

Pediatric Night

"Experiences with Transfusion in Infancy and Childhood." Dr. Arthur H. London, Jr., Children's Hospital.—There has long been a fear, among physicians, of transfusion, and it is the speaker's purpose to emphasize its benefits and that transfusion is neither extremely dangerous nor difficult. This paper will deal first, with selection of the donor; second, with the method of administration; third, with indications.

(1) Members of the family, friends, or a professional donor may be used, though in working with children the donor is usually the parent. The donor should be of the same type, cross agglutination tests being carefully made (cells of donor and serum of patient and serum of donor and cells of patient being mixed), observations being made at the end of a half hour. A blood Wassermann should be taken and inquiry made as to presence of malaria. Only a robust, healthy donor, who has fasted over a period of several hours, should be employed. Cross agglutination tests should be made before each transfusion.

There are two methods of administration, the citrate method, and the direct method. (Lantern slides indicated the apparatus used in both methods.) The direct method is more satisfactory than the citrate, especially in certain types of blood dyscrasias and infections, for there is less reaction, nor has there ever been evidenced danger of transmission of disease to the donor, though the method has been used in treating streptococcic septicemia, typhoid, and other serious diseases. It can be given either by the intravenous route, which is the method of choice since the blood passes directly into the circulation without delay or change, or by the intraperitoneal route, which is simpler but in which absorption is uncertain.

Transfusion is indicated in hemorrhage, shock (especially postoperative), diseases of the blood, nutritional disturbances, infections, toxemias, etc. It is specific in hemorrhagic disease of the newborn, it checks bleeding in the hemophiliac, is of great benefit in any secondary anemia and acts as a stimulant to the hematopoietic system. Prematures are greatly helped by transfusions as are pre- and postoperative cases of pyloric stenosis. Arthritis, acute nephritis, burns, carbon monoxid poisoning, endocarditis, erysipelas, mastoiditis, pyelitis, osteomyelitis, typhoid, tuberculosis, all do well with transfusion and in toxic pneumonias with secondary anemia, it increases the available oxygen carriers and immune bodies as well as relieves the anemia. The objection occasionally raised, that it embarrasses the heart, has never been observed by the speaker. Lantern slides illustrated the striking effect of transfusion, especially if an autogenous immunized donor is used, for patients running high toxic temperatures for a long time. Specific sera should be used in conjunction with transfusion in certain diseases. Often blood disappears from the urine immediately after transfusion of an acute, hemorrhagic nephritic. In toxemias, it may be well first to exsanguinate to decrease acidosis and remove toxins.

Dr. Harold W. Jones, in discussing this paper, would stress that transfusion should be done only by the experienced. Cross matching is necessary before each transfusion to eliminate the danger of a hemolytic reaction. If any intravenous injection has been given between the time of cross-matching and transfusion, the cross-matching should be repeated. The fontanelle route in infants is dangerous. The dose may be judged by the height-weight ratio, the standard dose is to the standard surface area as the desired dose is to the surface of the donor. In purpura hemorrhagica, transfusion stops the hemorrhage, increases the platelets, and is the most satisfactory treatment, more than one transfusion often being needed per day. In blood-stream infections, transfusions should be used freely, until the hemoglobin is one hundred per cent. Repeated small transfusions are advisable. In infections of the ear, nose, and throat, chronic infections with temperature, loss of weight and appetite, transfusion is almost a specific. More brilliant results are obtained by this method of treatment than with any other and it is not used often enough.

In closing the discussion, Dr. London said that the estimation of dose made by him is on the basis of from ten to fifteen c.c. of blood per pound of body weight, preference leaning to the smaller dose, repeated.

"The Present Status of Immunization Against Tuberculosis with B. C. G." Dr. Joseph D. Aronson, of the Henry Phipps Institute. Work along this line was stimulated by the fact that in those with cervical adenitis or tuberculosis of the skin absence of pulmonary tuberculosis is striking. It was observed by Koch in 1891, that guinea pigs injected with tubercle bacilli showed on the seventh to ninth day after injection, swelling at the site of injection, enlargement of the glands, ulceration and subsequently, death. If, however, the animal had previously received a small amount of tubercle bacilli there was less reaction, sloughing, and healing—in other words, an immunity, manifesting itself as resistance to infection. In the human, there are two types of tuberculosis, that occurring in childhood, with lesions any-

where in the lung, with increase and caseation of the regional lymph nodes, and that occurring in the adult, limited, evidently a reinfection, with scars in the apex, indicating an immunity. Attempts were made to vaccinate cattle, both with the products of the bacilli and with dead bacilli, and a great quantity of work with bubovaccination, with attenuated bacilli and with other acid-fast bacilli, has already been forgotten. Webb and Williams tried giving small, increasing doses of virulent bacilli to children, for to produce the Koch phenomenon it was found necessary to give virulent tubercle bacilli. Calmette established the principle that small doses of living cultures given at long intervals create immunity, given at short intervals, cause tuberculosis. He uses the tissue culture method, since B. C. G. is nontoxic as the fibroblasts resist the action. B. C. G. does at times produce tuberculosis, provided it has first been put on another, nonbile-containing medium. B. C. G. contains two types of organisms: one, rough, avirulent; the other, smooth, virulent. Guinea pigs given small doses (1-3 mgm.) of B. C. G. show no lesions, though larger doses produce a small nodule which is usually absorbed. Unvaccinated guinea pigs, exposed to tuberculosis, lived, on an average, 82 days, compared with 152 days in the vaccinated animals. Varying reports come from the use of B. C. G. in cattle, and the tuberculin reaction in cattle after B. C. G. by mouth is irregular. Few statistics are available on its value in human vaccination. It has been estimated that 38 per cent of children in Philadelphia have had tuberculosis at five years, and 81 per cent at 15 years. Of 4854 unvaccinated babies, from 1925 to 1927, 21.4 per cent died, and of these deaths, 15.9 per cent were from tuberculosis. Of over one thousand patients vaccinated, in France, only 1 per cent died of tuberculosis. The presence or absence of contacts is not given in the statistics. From reports of New York City, mortality among a large group of unvaccinated patients was 15.8 per cent, of these, 8.5 per cent from tuberculosis; among the vaccinated, the mortality was but 7.4 per cent, and only 1.1 per cent of these from tuberculosis. Of nearly 600 patients wherein there was no contact with an active case of tuberculosis and to whom vaccine had been given, forty-two died and no sign of tuberculosis was found at autopsy. Of 618 in contact with active cases and so treated, 9 died, and in only 3 was the disease found. Autopsies made on children dying of intercurrent disease, children, that is, who have been vaccinated, show no organism in the blood which, when inoculated into a guinea pig will produce tuberculosis. Up to January, 1930, about 210,000 vaccinations had been done in France. Resistance to infection may occur with a negative tuberculin reaction. The potency of the tuberculin should be known, that used at Phipps being standardized daily and freshly prepared, without preservative. Of 22 babies given B. C. G. (10 in positive sputum, 10 in suspected sputum, and 2 in negative families), 2 died of bronchopneumonia, but none of tuberculosis. B. C. G. can be given orally to the newborn without danger of infecting them. It is especially indicated in positive families and should be given by mouth within the first 10 days of life, 10 mgm. of freshly prepared culture every 48 hours for 3 doses.

Dr. Eugene L. Opie, discussor, said that while there is immunity in tuberculosis an inconvenient feature lies in the fact that it is never absolute, is transient, disappearing after the lesions are healed, and it can be overcome by an amount of subsequent infection. Results are more certain with the virulent than the nonvirulent organism. B. C. G. virus should be regarded as highly avirulent tubercle bacillus, producing some protection but less than the virulent organism. By mouth it has produced sensitization and a certain amount of protection and gives promise, therefore exposed children should be given the benefit of it. It offers hope of reducing the deaths from tuberculosis of those exposed to it, below the existing 20 per cent. It will hardly protect the adult, for one-year immunity is probably the maximum.

Dr. Ward Brinton commended the papers. Dr. Aronson expressed a willingness to coöperate with any physician in any case. MARY A. HIPPLE, *Reporter.*

WARREN—MAY

Dr. W. B. Mosser, of the Community Hospital, Kane, addressed the society, Monday, May 19, on the subject of "Goiter." After classifying goiters under four main groups, he indicated the treatment required for each group. The goiter of puberty and pregnancy, which is a hypertrophy of a more or less diffused character in the great majority of cases and tends to disappear spontaneously. A few, however, persist and develop into colloid. The treatment is always medical in these cases, especially in the young. After thirty years of age and, if the gland is distinctly nodular, surgical treatment may be required to prevent it from becoming toxic. Nodular goiter may be made toxic by the use of iodin. Surgical treatment is indicated for the relief of pressure, for toxicity, and to remove a deformity. Pressure symptoms may be determined by the x-ray and may be either on the trachea, the recurrent laryngeal nerve, or on the esophagus. The symptoms of thyrotoxicosis were elaborated, and the speaker said that while rest, x-ray, and radium have their place, relapses are common and damage to the system beyond repair may occur. Surgery seems the best and logical method, and is indicated before serious damage occurs. Statistics were given and reference made to the experiments with school children in the prevention of goiter. Dr. Mosser's survey was very much appreciated.

A motion picture film of surgical technic for gastric ulcers was exhibited.

Twenty-eight members were present, and the hosts for the meeting were Drs. Knapp, MacDonald, Mervine, and Noeson. M. V. BALL, M.D., *Reporter.*

The Woman's Auxiliary to the Medical Society of the State of Pennsylvania

MRS. WILDER J. WALKER, *Editor*
546 South Street, Greensburg, Pa.

THE MONTHLY MESSAGE OF THE PRESIDENT

DEAR AUXILIARY MEMBERS:

"You can always get thousands for crippled children and millions for highways, but nobody takes the slightest interest in sewers."

"Well, you can hardly blame them. Twenty years ago I had to spend $69.35 for a new third-hall carpet, and I've never recovered from the shock. Nobody ever saw it, and I got no credit for it, but I simply had to have it, for the old one was through to the boards."

This conversation, dear auxiliary members, took place when I was discussing with Dr. Theodore B. Appel the question of decent drinking water for Pennsylvania in an effort to find some way in which the auxiliary could help him speed up the job. That the job is a staggerer no one can doubt who has read the report of the Sanitary Water Board to the Governor, in May, 1928, and this month I want to say a few words to you about this report, particularly about the vision, the fair-mindedness, and the practical common sense that breathe in every paragraph.

The Sanitary Water Board was created in 1923 for the protection of Pennsylvania's waters, and is one of the agencies vitally affecting the health of our own State and of our neighbors. Dr. Appel is chairman, and the other members are Mr. Charles E. Dorworth, Secretary of Forests and Waters; Mr. N. R. Buller, Commissioner of Fisheries; Dr. J. Norman Henry, former president of the State Medical Society; Dean Elmer A. Holbrook, of the University of Pittsburgh; and Mr. P. T. Davis, of Clearfield. The magnitude of the water problem in a population of 10,000,000 souls, mostly crowded into cities, might well give pause, for their livelihood depends on the prosperity of their great industries, especially mining and manufacturing, which in turn depend largely on a convenient and ample water supply. Here obviously is a situation demanding talents of wide range and very high order, and Pennsylvania is to be congratulated on the personnel of this Board.

The first step was naturally a study and classification of all streams: (A) those uncontaminated; (C) those, for the present, past help; (B) all those in between, and on these all efforts have been concentrated. Laboratories on wheels, similar to the State Health Cars, with expert chemists and physicists in charge, have toured the State, measuring stream flow, analyzing water samples, conferring with municipal officials and industrial executives. The effort is to vision the problem in a large way for a whole river valley, to map out a general plan for the treatment and disposal of sewage and industrial waste that will effectually protect the entire population of the district without putting out of business the industries on which it lives. Of what use to provide water, no matter how pure, if one has no money to buy also bread and meat, carrots and spinach?

This preliminary survey and classification required between two and three years, after which the mass of data had to be studied, and a practical and practicable plan of campaign mapped out. The streams themselves, with the help of sun and air, will take care of a large part of the program, but the old saying that a stream purifies itself in ten miles must be modified according to its flow, and to the amount and character of its contamination. The powers of the Board are strictly defined by law, and are not as broad as could be desired. Unfortunately, they do not include authority to issue industrial waste permits, but this is less important than might be imagined, as study has shown that the most serious menace is sewage. (Alas, how splintery are those third-hall boards!) A policy of conciliation and persuasion, however, has worked wonders in securing the coöperation of municipalities and manufacturers, who will, after all, be themselves the beneficiaries of any improvements.

Small rural communities rarely have enough money even for things that show, still less for those underground, so one of the important functions of the Board is to encourage and assist such municipalities in laying out financial programs, covering a period of years, for treatment and disposal of sewage.

The Board coöperates also with the great industrial groups in studying the problems of their own industrial wastes, and in devising means to protect the community health without destroying the business on which the community lives. The tanners alone have already appropriated $75,000 for the study of their waste disposal, with truly brilliant results.

Practically all our Pennsylvania streams flow at some point in their course through other states, so the good offices of the Board have been employed to bring about agreements with our neighbors to carry out similar treatment, and with outstanding success. Again, in cases of sudden and unpredictable pollution, such as breakdown of machinery, etc., the Board sends immediate warning to all communities thus placed in jeopardy.

It is impossible, of course, to give in a few paragraphs more than the barest indication of the scope and thoroughness of the study the Board has made of the water problem, but results are beginning to speak for themselves. The cleaning up of the Beaver River Valley is an outstanding achievement. Here the water supply for 300,000 persons is now thoroughly protected. Indeed, throughout the State one may mount to the third floor to point with pride at the new hall carpet. In 1905, the whole State of Pennsylvania could boast of only 15 sewage disposal plants, whereas in 1928 these had multiplied to 225, the largest, a 60,000,000 gallon a day plant, serving northeast Philadelphia.

Hopes are held out even for that sink of in-

iquity, the Schuylkill Valley. For the past three years two of the laboratory cars have devoted their entire attention to this district, with the result that according to a report, dated March, 1930, every town from Reading to Philadelphia either already has a sewage disposal works in operation or is in process of installing one. Moreover, thanks to the tact and reasonable attitude of the Board in its coöperation with the captains of industry (I quote from this 1930 report), "the organic load upon the Schuylkill River from discharge of industrial wastes has been lightened about 70 per cent." Cheer up, Philadelphia! We may yet outlive Dr. Emerson!

With the whole State mobilizing in pursuit of pure water, and with the daily papers in full cry on the chase, I naturally turned to Dr. Appel to ask what the auxiliary could do to help. He not only sent me these illuminating and truly thrilling reports, but talked to me for a half hour on the magnitude and the difficulties of the problem, and the method by which the Board is trying to solve it. In this connection, let me say that the State Laboratory Cars are the first of their kind ever put in operation and (I quote from the 1928 report) "represent the most advanced step to secure an evaluation of the conditions of complete river systems yet taken in this country."

Many years will be required to complete this work, which is a job for highly-trained technical experts. The auxiliary can be an efficient ally by keeping itself informed of the progress of the work, by creating public opinion to support it, and above all by voting the necessary appropriations for the third-hall carpet.

One last word. "Don't shoot the pianist. He's doing his best." Faithfully yours,

CORINNE KEEN FREEMAN, *President.*

COUNTY AUXILIARY REPORTS

Allegheny.—Not long ago a folder was sent out by the Woman's Auxiliary—"Why be a member of the Auxiliary?"—with four good reasons for belonging, fully explained. It was an illuminating folder and is bearing fruit in an increase in membership in the auxiliary. We might profitably put out another such folder —"Why remain a member of the Auxiliary?"—and use the same four reasons: Student Loan Fund; Medical Benevolence Fund; health education; Allegheny County Medical Society Permanent Home.

We believe these reasons are sufficient to claim your interest. We believe that the nonpayment of your dues is an oversight, rather than intentional. We believe that you do care what becomes of the man who has given himself to his profession, and has neglected to provide for his own old age.

We believe that you do desire to see the standard of medicine held high by men whose ideals are true; who are anxious to work and to save and to sacrifice to acquire a medical education.

We believe that you do wish to know what there is to be told of the mind, the soul, and the body, and the means for the maintenance of each of them.

We believe that you do wish to see the Allegheny County Medical Society in a real home, all its own.

The answer to it all is—*pay your dues.*

Cambria.—The March and April meetings were held at the Nurses' Home of the Conemaugh Valley Memorial Hospital, Johnstown. The March meeting was devoted to the first study envelope. This was outlined and discussed by Mrs. C. K. Tredennick and Mrs. W. E. Grove. Mrs. Tredennick illustrated her discussion by citing facts and conditions of child health existing within a short distance of Johnstown.

The April meeting was attended by thirty-two members. Previous to the business meeting, Dr. F. G. Scharmann gave an interesting talk about "the doctor in politics." Dr. Scharmann related many facts pertaining to bills in the legislature, and how important for the women voters to acquaint themselves with the candidates who will protect the medical profession. Five new members were added to the auxiliary roll. Mrs. J. J. Meyer, general chairman of the convention committees, discussed the convention plans that are shaping up splendidly for October. Bridge was a feature of the social hour.

Delaware.—The April 10 meeting was held at the Chester Hospital, with Mrs. Owen presiding. Mrs. Webster reported the card party, given for the Benevolence Fund, a financial success. In March, Mrs. Owen gave a luncheon and bridge at her home, to raise funds for the auxiliary. Mrs. Webster invited the auxiliary to attend Founder's Day (May 25) at the Crozier Hospital. The chief business of the evening was the reading and acceptance of the proposed by-laws.

The members were invited to a luncheon and bridge, April 26, with Mrs. Cross and Mrs. Armitage as hostesses.

Refreshments were served at the close of the business meeting.

Erie.—The philanthrophy department of the Woman's Club of Erie had as their guests on the afternoon of April 15 the members of the Woman's Auxiliary. Mrs. Stark had charge of the program which was presented by the auxiliary. Dr. John B. Eckel, professor of mental and nervous diseases at the University of Buffalo, spoke on "Basic Factors in Causes of Mental and Nervous Diseases." Mrs. J. W. Schilling sang several numbers. Tea was served at the termination of the meeting.

The monthly meeting was held at the home of Mrs. J. D. Stark, May 5. Both a business session and a musical were included in the afternoon's program.

Soprano solos, "The Little Shepherd Song," "Little Star," and "Spring," were sung by Mrs. Martin D. Levy; selected readings by Queenie Malcolm; and contralto solos, "She Stands There Smiling," "To Daffodils," and "An April Song," by Mrs. Charles D. Leslie. Tea concluded the session.

Lackawanna.—The regular meeting for April 8 was held in the Chamber of Commerce Building, the president, Mrs. U. P. Horger, in charge. Mrs. F. R. Bausch, of Allentown, councilor of Northeastern Pennsylvania and formerly State treasurer, gave an interesting talk. She stressed the importance of health education and told of the wonderful work of the va-

rious presidents of the auxiliaries and of our State organizations.

Dr. F. P. Hollister, president of the Lackawanna County Medical Society, and Dr. F. J. Bishop, Trustee and Councilor of the State Socicty, addressed the meeting. Dr. Bishop presented helpful suggestions for increasing the membership, and outlined several interesting programs for the coming months. He announced that during the month there would be a public meeting at which Dr. Frank, of Reading, would show motion pictures and lecture on "What the Hospitals Mean to the Public" and later Dr. Morris Fishbein, of the American Medical Association, would give one of his famous talks, "Quacks and Quackers." Dr. Bishop urged the auxiliary to help increase the Benevolence Fund, and to give attention to the public meeting of the State Tuberculosis Socicty.

Lancaster.—The annual election was held, April 2, at the home of Mrs. Robert D. Swab, with the following results: president, Mrs. J. T. Herr, Landisville; vice-presidents, Mrs. G. W. Stoler and Mrs. W. K. Baer; secretary, Mrs. H. J. Roddy; corresponding secretary, Mrs. J. H. Esbenshade; treasurer, Mrs. Kearney Smith.

The business meeting was followed by an hour of music.

The May 7 meeting was held at the offices of Dr. Anna Klemmer, with the new president, Mrs. Herr, in the chair. Mrs. Theodore B. Appel talked on, "What the Auxiliary Can Do," and gave several very practical suggestions. A social hour with refreshments followed.

Lehigh.—The April meeting was held at the Hotel Traylor, with Mrs. Charles R. Fox presiding. A business meeting at which plans were completed for the card party held at the Woman's Club, May 10, preceded the program given by Miss Theresa McKenna, physical directress of the Y. W. C. A. Miss McKenna gave an interesting talk and two of her pupils demonstrated interpretive dancing and relaxation exercise. The sum of $100 will be sent to the Benevolence Fund.

Lycoming.—The April business meeting, preceded by a luncheon, was held at the Woman's Club on the tenth. Four new members were presented by the membership committee chairman. Mrs. John A. Campbell, *Hygeia* chairman, reported eight subscriptions. A committee was named by the president, Mrs. Brenholtz, to draw up resolutions in regard to the dust and smoke nuisance, which will be sent to the Chamber of Commerce of Williamsport. A round-table discussion took place after routine business was transacted. Suggestions for the betterment of the organization were made and ways of making the meetings more interesting were discussed. Mrs. Pinta, of Reading, was a guest.

On the afternoon and evening of April 30, a delightful and successful card party was given at the home of Dr. and Mrs. L. E. Wurster. The proceeds, $150, were given to the Benevolence Fund. Plans were made for a joint meeting of the woman's auxiliaries of the seventh councilor district and the medical auxiliary to be held at the Woman's Club, Williamsport, Friday, June 13. Mrs. Edward Lyon, councilor of the seventh district, will be in charge. The wives of physicians, who may attend the men's councilor meeting on the same date, are invited to come to the meeting.

Dr. Thomas G. Simonton, of Pittsburgh, spoke on the value of periodic health examination. The program was in observance of the national campaign for better health and carly diagnosis. Mrs. E. W. Meredith, of Pittsburgh, was a guest and spoke briefly of the activities of the Allegheny County Auxiliary.

The regular monthly luncheon meeting, held at the Woman's Club, May 8, was in charge of the president, Mrs. Brenholtz. The name of Mrs. F. C. Lechner was proposed for membership.

Mifflin.—The April meeting held at the home of the president, Mrs. J. G. Koshland, was most interesting. Several new members were received from Mifflin and Snyder Counties. Special contributions were given to the local hospital. Mrs. Cassidy is giving a luncheon in the near future, the proceeds of which will be given to this special fund. Luncheons will be given by different members for the benefit of this fund.

Northampton.—The regular monthly meeting and luncheon were held on Wednesday, April 9, at the Elks' Club, Bethlehem.

Twenty-five members were present and enjoyed an interesting talk given by Mrs. Fredrick Bausch, of Allentown. Mrs. Bausch is one of the district councilors. Following the luncheon was a brief business meeting, at which Mrs. W. Gilbert Tillman, presided. The remainder of the afternoon was spent playing bridge, four prizes were given.

Philadelphia.—The regular monthly meeting was held April 15 at the County Medical Building. Mrs. Krusen presided. An interesting talk was given by Mrs. Vincent A. Dirvin, "What the Alliance of Catholic Women of the Archdiocese has done for the City's Health." Sister Marie gave a splendid report on the work done among the needy children of the city. During the social hour which followed, Mrs. Stephen J. Kearney presided at the tea table.

Westmoreland.—The monthly meeting was held at the Elks' Club at Greensburg, May 6. The business meeting was preceded by a dinner with twenty-four members and guests present. A motion was passed that $100 be given to the Benevolence Fund. Plans were discussed for an outing to be held some time in June for the members of the auxiliary, their husbands, and friends. The president announced that the regular meetings will be dispensed with during the summer months and that Mrs. C. D. Ambrose very kindly invited the members to her home in Ligonier for the next meeting in September.

After the business meeting, the members adjourned to the Y. M. C. A. Building, at which an interesting talk on mental hygiene was given by Dr. Robert T. Hood, of Pittsburgh.

Medical News

Deaths

MRS. ESTHER NOBLE WEIGLE, wife of Dr. Henry S. Weigle, of Philadelphia; May 3.

MRS. ELEANOR K. ROEPKE, wife of Dr. Henry F. Roepke, of Philadelphia; April 22.

ALBERT F. WOLL, M.D., of Philadelphia; Hahnemann Medical College, 1896; aged 57; May 8.

MRS. ANNA M. MACDONNELL, wife of Dr. William T. D. MacDonnell, of Philadelphia; April 30.

LOUIS C. BENERMAN, M.D., of Philadelphia; Jefferson Medical College, 1887; aged 68; May 7.

JOSEPH S. KITCHEN, M.D., of Philadelphia; Jefferson Medical College, 1906; aged 52; May 15.

CHARLES E. PRICE, M.D., of Philadelphia; Jefferson Medical College, 1900; aged 54; May 14.

Albert C. Morozzi, M.D., of Honey Brook; Hahnemann Medical College, 1894; aged 57; May 15.

Alfred L. Shearer, M.D., of Harrisburg; New York University Medical College, 1883; aged 71; May 8.

Albert L. Usset, M.D., of Chester; Medico-Chirurgical College of Philadelphia, 1915; aged 39; May 6.

John P. Longwell, M.D., of Wellsboro; Chicago Homeopathic Medical College, 1893; aged 61; April 14.

George H. Thatcher, M.D., of Philadelphia; Hahnemann Medical College, 1892; aged 62; May 20.

Richard L. Wright, M.D., of Philadelphia; Jefferson Medical College, 1869; May 19.

John H. Davis, M.D., of Narberth; Jefferson Medical College, 1906; aged 51; May 20.

James C. Stirk, M.D., of Swarthmore; Hahnemann Medical College, 1891; aged 61; May 23.

J. Miller Shartle, M.D., of Lancaster; Jefferson Medical College, 1884; aged 72; April, of heart disease.

James P. Calvert, M.D., of Philadelphia; University of Pennsylvania School of Medicine; aged 61; May 5.

John J. Mechem, M.D., of Masontown; University of Pittsburgh School of Medicine, 1900; aged 54; April 10.

Victor J. Koch, M.D., of Nazareth; University of Pennsylvania School of Medicine, 1903; aged 53; May 8.

Charles W. Gessler, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1867; aged 85; May 2.

Lincoln Stotler Brown, M.D., of Pittsburgh; Hahnemann Medical College, 1893; aged 64; April 17, of pneumonia.

Dudley T. Cooke, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1885; aged 68; March 1.

William A. Ryan, M.D., of Scranton; Medico-Chirurgical College of Philadelphia, 1911; aged 45; April 23.

Parker P. Horner, M.D., of Conifer; University of Louisville School of Medicine, 1894; aged 63; April 13.

Elmer Clark Ritchey, M.D., of Pittsburgh; University of Pittsburgh School of Medicine, 1897; aged 61; May 2, of pneumonia.

Andrew Jackson Gibbons, M.D., of Carmichaels; Miami Medical College, Cincinnati, 1878; aged 81; March 13, of nephritis.

Thomas S. Anderson, M.D., of Pittsburgh; Jefferson Medical College, 1888; aged 65; May 1, of cardiovascular renal disease.

Radcliffe Cheston, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1883; aged 69; May 13, of heart disease.

Clarence W. Hotchkiss, M.D., of Wesleyville; University of Pittsburgh School of Medicine, 1900; aged 54; April 2, of heart disease.

Harry Arnold Briney, M.D., of Pittsburgh; University of Pittsburgh School of Medicine, 1895; aged 68; March 20, of chronic myocarditis.

Clarence Andreas Hofer, M.D., of Metuchen, N. J.; Jefferson Medical College, 1899; early in his career practiced in this State; aged 63; May 5.

Jacob Hamilton Hildebrand, M.D., of Biglerville; Sewanee Medical College of Tennessee, 1898; aged 69; May 14, from the effects of a paralytic attack suffered after an automobile accident.

Miss S. Lillian Clayton, 55, superintendent of nurses at Philadelphia General Hospital since 1915, died May 2, after an illness of forty-eight hours. Miss Clayton was president of the American Nurses' Association and had held many positions of prominence in her profession. When only fourteen she enrolled in the Children's Hospital, then at 22d and Walnut Streets, Philadelphia, and completed her training at the Philadelphia General Hospital, when she accepted a position as assistant superintendent of nurses at the Miami Valley Hospital and Training School, at Dayton, O. Miss Clayton remained in Dayton for seven years and resigned to enter Teachers' College, Columbia University, and from there she went to Minneapolis to become superintendent of nurses in the City Hospital. In 1915 Miss Clayton returned to Philadelphia to become superintendent of nurses at the Philadelphia General Hospital, and during the fifteen years of her incumbency she placed the training school on a plane that caused it to be recognized as outstanding among training schools of the United States. She was also president of the Nurses' Alumni Association of the Philadelphia General Hospital, National League of Nursing Education, and past president of the Pennsylvania State Board of Examiners for Registration of Nurses. She was a member of the board of directors of the *American Journal of Nursing*, a member of the National Defense Council during the World War, and on the board of directors of the International Council of Nurses. Three times she was selected by executives of the Rockefeller Foundation from among thousands of American nurses to study hospitalization methods in European cities.

Births

To Dr. and Mrs. Alfred A. Ferry, of Philadelphia, a son, David Francis Ferry, May 7.

To Dr. and Mrs. Daniel R. Hughes, of Elbon, a son, Melvin Robert Hughes, April 17.

To Dr. and Mrs. Walter M. Brenholtz, of Williamsport, a son, George Walter Brenholtz, May 8.

Engagements

Miss Carlyn Janet Manasses, daughter of Dr. and Mrs. Jacob L. Manasses, and Dr. Louis Tuft, all of Philadelphia.

Miss Virginia Watson, daughter of Dr. and Mrs. William R. Watson, and Mr. Arthur H. Hacker, Jr., all of Philadelphia.

Marriages

Miss Melba Taylor Dingle to Dr. Robert N. Downs, Jr., of Philadelphia, May 14.

Miss Babs Oppenheimer, of New York, to Dr. Edward Weiss, of Philadelphia, in May.

Miss Sedric Williams, of Cambridge, Mass., to Dr. Fielding Otis Lewis, of Philadelphia, June 3.

Miss Irma R. Schwatt, daughter of Dr. and Mrs. I. J. Schwatt, to Mr. James MacDonald Clawson, all of Philadelphia, May 10.

Miss Madeline Wilson, daughter of Dr. and Mrs. Oscar Wilson, of Philadelphia, to Mr. Paul N. Longley, of Oakmont, April 26.

Miss Madeline Ulman, daughter of Dr. and Mrs. Joseph F. Ulman, of Philadelphia, to Mr. Albert R. Eckmann, of New York City, in May.

Miss Elizabeth Bailey Machen, of Ardmore, to Mr. John Lewis Thomas, son of Dr. and Mrs. J. Quincy Thomas, of Conshohocken, May 14.

Miss Charlotte Elizabeth Hume, of New York, to Dr. Norman Easton Freeman, son of Mrs. Walter Jackson Freeman, of Philadelphia, June 7.

Miss Sylvia Vail Walker, daughter of Dr. and Mrs. William Pomp Walker, of Bethlehem, to Mr. Jerry Dillon, of New York City, June 5.

MISS ALICE WAIT, daughter of Dr. and Mrs. Oliver Babcock Wait, of Philadelphia, to Mr. Thomas Bradford Drew, of Boston, Mass., June 9.

MISS PHEBE HANCE EBERHARD, daughter of Dr. and Mrs. Henry M. Eberhard, of Merion, to Mr. Wendell Brenneman Stewart, of Cynwyd, June 10.

Miscellaneous

PENNSYLVANIA is one of the twenty-one states requiring an annual registration of physicians.

JOHN J. SCHWARTZ, who died April 6, bequeathed $800 to Temple University Hospital, Philadelphia.

DR. GEORGE S. CONDIT, of Warren, is a patient at the Walter Reed Hospital, under observation.

DR. ERNEST J. COWDEN, of Warren, continues to be confined to his home with serious circulatory trouble.

DR. FRANCIS X. DERCUM, of Philadelphia, has made a good recovery from a severe attack of influenzal pneumonia.

DR. FRANK C. PARKER, of Norristown, has been admitted as a Fellow of the American College of Surgeons.

DR. AND MRS. HENRY W. GEORGE, of Middletown, with their two daughters, are enjoying several months in Europe.

DR. AND MRS. ALBERT E. ROUSSEL, of Philadelphia, are spending some time traveling in France and Switzerland.

DR. FRANK A. TRIPPE, of Erie, is now pursuing a six months' postgraduate course in surgery in the European clinics.

THE AMERICAN ASSOCIATION for the Study of Goiter will meet in Seattle, Washington, July 10 to 12, at Tacoma and Mount Rainier.

DR. CLIFFORD G. GRULEE, of Chicago, addressed the Pittsburgh Pediatric Society, April 26, on "Intraperitoneal Therapy in Infants and Children."

DR. AND MRS. ALBERT H. BUCHER, of Harrisburg, sailed in May for Europe. They will spend some time in Vienna, where the doctor will study.

DR. H. M. BECKER has been appointed superintendent of the Mary M. Packer Hospital, Sunbury, to fill the vacancy caused by the death of Dr. H. W. Gass.

DR. B. H. HAMNER, of Williamsport, recently did postgraduate work in asthma, hay fever, and other allergic diseases at the Jefferson Hospital.

THE MEDICOLEGAL SOCIETY of Philadelphia was addressed April 29 by Hon. Philip Sterling, of the Pennsylvania State Legislature, on "Interesting Phases of State Legislature."

"DOCTOR" B. DAVIS INGRAM, a negro, who attempted to establish medical offices in Williamsport, was summoned to court for practicing medicine without a license.

THE STATE DEPARTMENT OF HEALTH has won out in three court actions resulting from piggery disputes in Montgomery County. The court maintained that piggery nuisances must be abated.

DR. AND MRS. PAUL SNOKE, of Lancaster, recently sailed for Europe. Dr. Snoke plans to spend several months studying with prominent roentgenologists in Germany and Austria.

DR. FRANK C. HAMMOND, of Philadelphia, addressed the R. W. Hall Pre-Medical Society of Lehigh University, Bethlehem, May 7, on "The Selection of Applicants by the Medical Schools."

THE DATES OF THE Second International Pediatric Congress, to be held in Stockholm, have been changed to August 18-21. Communications should be addressed to the Congress, Stockholm, Sweden.

CALIFORNIA, NEW MEXICO, AND WYOMING are said to be the only states that do not make some provision for exemption, or partial exemption, of hospital property owned by a nonprofit taking organization.

THE PHILADELPHIA HOMEOPATHIC MEDICAL SOCIETY held their monthly meeting May 8, at the Hotel Pennsylvania. Arterial hypertension, commonly known as high blood pressure, was the subject for discussion.

DR. J. WHITRIDGE WILLIAMS, of Baltimore, Md., delivered the R. W. Stewart Memorial Lecture before the Pittsburgh Academy of Medicine, April 22, on "The Clinical and Pathologic Study of Prepuerperal Bleeding."

DR. E. J. COWDEN, one of the oldest members of the Warren County Medical Society, is seriously ill at his home. Mrs. Cowden is also suffering from a broken humerus, which required the removal of the head of the bone.

DRS. B. W. SHIREY and Francis R. Wise, of York, sailed May 15 on the *Majestic* to attend the foreign assemblies of the American Post-Graduates' School of Medicine Clinics, which will be held in the university hospitals of the capital cities of Europe.

DR. RONALD L. JARDINE, of Detroit, Michigan, has opened offices at Williamsport in the suite formerly occupied by the late Dr. Harry J. Donaldson. Dr. Jardine has been connected with the Harper Hospital at Detroit for several years.

DR. EMMA T. FRYER, who is connected with the Philadelphia General Hospital at Byberry, was the only applicant who qualified before the Civil Service Commission for appointment as assistant resident physician, Bureau of Hospitals.

THE ERIE ANTI-TUBERCULOSIS SOCIETY has voted to change the name of the society to the Erie County Health and Tuberculosis Association. At the same time the membership of the board was increased to forty-two, representing all lines of business and professions.

DR. THOMAS KLEIN, professor of therapeutics at the Temple University School of Medicine, has been appointed professor of clinical medicine; and Dr. Allen G. Beckley, who served during the World War with the rank of major, was appointed clinical professor of medicine.

THE SAMUEL D. GROSS PRIZE of the Philadelphia Academy of Surgery has been awarded by the trustees to Dr. Emile Holman, of Stanford University Hospital, San Francisco, Calif., for his essay on "Abnormal Arteriovenous Communications."

DR. GEORGE W. CRILE, of Cleveland, will speak on a surgical subject at the annual meeting of the Eleventh Councilor District of the Pennsylvania State Medical Society, June 12; and Dr. Orlando H. Petty, of Philadelphia, on diabetes mellitus.

AT THE MAY 1 MEETING of the Obstetrical Society of Philadelphia, the following officers were elected: president, Collin Foulkrod; vice-presidents, Floyd E. Keene and Charles S. Barnes; secretary, Lewis C. Scheffey; treasurer, George W. Outerbridge.

DR. AND MRS. J. STEWART RODMAN, of Wynnewood, recently sailed for England, where Dr. Rodman will attend the meeting of the General Medical Council held in London, and visit medical schools in England and Scotland, returning home about July 1.

THE NEW YORK STATE FEDERATION OF WOMEN'S CLUBS believes that illness wrecks thousands of happy American homes, and is almost as large a factor in domestic unhappiness as divorce. Ailing children de-

stroy family routine and happiness, and children's illnesses often are neglected.

THE FOLLOWING DOCTORS were recently elected as officers of the Miner's Hospital, Spangler, for the ensuing year: president, E. F. Arble, Carrolltown; vice-president, W. A. Blair, Spangler; secretary, B. F. Bowers, St. Benedict; treasurer, G. R. Anderson, Barnesboro.

A $100,000 CAMPAIGN has been launched to purchase equipment for the new building of the Woman's Medical College of Pennsylvania, Philadelphia. The cornerstone of the proposed building at Henry Avenue and Abbottsford Road will be laid on June 11, commencement day.

AT THE THIRTY-SEVENTH ANNUAL COMMENCEMENT of the training school for nurses of the Danville State Hospital, held May 15, eleven nurses were graduated, and eight male attendants were awarded certificates. Dr. Frank C. Hammond of Philadelphia delivered the address. The prizes were awarded by Dr. J. Allen Jackson.

REAR ADMIRAL CAREY T. GRAYSON, U.S.N., retired, president of the Gorgas Memorial Institute of Tropical and Preventive Medicine, Washington, D. C., delivered an address before the Pittsburgh Chamber of Commerce, April 22, which inaugurated the public health movement of that city under the auspices of the Chamber of Commerce.

THE TWENTY-FOURTH ANNUAL MEETING of the Association of American Teachers of the Diseases of Children will be held at Hotel Fort Wayne, Detroit, June 24. The speakers will be Dr. Lawrence T. Royster, University of Virginia; Dr. Chevalier Jackson, Philadelphia; Dr. Roger H. Dennett, New York City; and Dr. Fred C. Zapffe, Chicago.

DR. JOHN V. MERSHON, of Philadelphia, former head of the orthodontic department of the University of Pennsylvania, was awarded the Jarvis Medal by the New York State Dental Society in New York, May 14. It is an annual award given for distinguished services to dentistry. The medal carries with it a fellowship in the New York State Dental Society.

DR. GEORGE E. DE SCHWEINITZ, on April 23, was announced winner of the 1930 Leslie Dana medal for prevention of blindness. The Dana medal has been given each year since 1925 to the person who performs outstanding work in the conservation of vision and the prevention of blindness. Leslie Dana of Brentmoor Park, near St. Louis, in 1925 donated a fund for presentation of a medal each year.

THE FRANKLIN INSTITUTE, Philadelphia, conferred the high distinction of election as an honorary member at its Medal Day exercises, May 21, on Dr. Henry Leffmann, Philadelphia chemist. The distinction was awarded to Dr. Leffmann in recognition of valuable services to science in research; in teaching, as former port physician of Philadelphia; and as a discriminating but good-tempered critic.

DR. AND MRS. GEORGE L. LAVERTY, of Harrisburg, sailed May 1 for several months' stay in Europe, where Dr. Laverty will study in the hospitals of Vienna, Berlin, and Munich. Last November Dr. Laverty was awarded the Seibert prize, which is given every two years to the member of the Harrisburg Academy of Medicine who has been most active and zealous in the interest of his profession and community.

AT THE MEETING OF THE AMERICAN SURGICAL ASSOCIATION, held May 16 in the College of Physicians, Dr. Arthur D. Bevan, of Chicago, advocated medical treatment for the majority of cases of peptic ulcers and declared that only in rare instances should there be an operation. Dr. Bevan said the peptic ulcers, which are also known as ulcers of the small intestines and walls of the stomach, occur in from ten to twenty per cent of the population.

ADDRESSING ONE OF THE MAY MEETINGS of the Philadelphia County Medical Society, Dr. Henry D. Jump, past president of both the county society and the State Society, declared medical science continues to be baffled in its attempts to find a cure for kidney diseases, one of the six leading causes of death. While a cure for kidney disease has not been found, life could be prolonged and the patient rendered more comfortable by proper medical supervision.

THE JEFFERSON MEDICAL COLLEGE, Philadelphia, has announced the following faculty appointments: Dr. Thomas C. Stellwagen, professor of genito-urinary surgery, to fill the vacancy caused by the death of Dr. Hiram R. Loux; Dr. J. Clarence Keeler, professor of otology, to fill the vacancy caused by the death of Dr. S. McCuen Smith; and Dr. Louis H. Clerf, professor of bronchoscopy and esophagoscopy, to fill the vacancy caused by the resignation of Dr. Chevalier Jackson.

AT THE DETROIT SESSION OF THE A. M. A., June 23-27, do not fail to visit Mead Johnson & Company's exhibit, booths 292-3-4, which will feature a unique display of historic interest to every physician who has a baby or who feeds babies. Through the courtesy of Dr. T. G. H. Drake, of the University of Toronto, there will be an exhibit of ancient feeding spoons, jugs, boats, and nursing bottles, some of which date back to 500 B. C., gathered from various parts of the world.

THE THIRTY-FIRST ANNUAL SESSION OF THE AMERICAN PROCTOLOGIC SOCIETY will convene June 22-24, at the Statler Hotel, Buffalo, N. Y. Dr. Daniel Fiske Jones, associate in surgery, Harvard Medical School, will address the Society on "The Operative Treatment of Carcinoma of the Rectum." There are no special Buffalo rates available, but the time of the meeting makes it possible to utilize the reduced rates for the A. M. A. meeting in Detroit. Make your reservations at once.

A PREEMPTORY ORDER, closing churches and motion picture shows in Franklin, was issued April 13 by the State Department of Health, Harrisburg, following disclosures that a smallpox patient living on the Venango-Clarion border had visited Franklin in the previous two weeks. The patient, a minister of churches at Kossuth, Ninevah, and several neighboring points, was taken ill April 3. He is said to have contracted the disease in Akron, Ohio. Between that time and when he took to bed he visited one of the two evangelistic services in progress at Franklin.

THE STATE DEPARTMENT OF HEALTH is planning to send its health car through Erie County during June. It will not visit Erie, but all other towns and villages so far as possible. The personnel consists of doctors, dentists, nurses, and a hygienist who will examine and advise treatment for all children from birth to six years of age. They are especially anxious to see children of the preschool age. No treatment will be given out, but all cases will be referred to the family physician or dentist.

THE WOMAN'S MEDICAL COLLEGE of Philadelphia has recently received the following subscriptions to the building fund: $1000 from Mrs. James Starr, president of the college; $1000 from Mrs. George Horace Lorimer, on behalf of the Republican Women of Pennsylvania; $1000 from Dr. A. A. Mitten; and $1000 from E. T. Stotesbury. Mrs. Lucretia Blankenburg, at a dinner given in her honor by the college, presented the school with a $100 "pot of gold" she recently received as the first "Fame Award" of the Philadelphia Club of Advertising Women.

THE UNITED STATES CIVIL SERVICE COMMISSION announces the open competitive examination for associated medical officers (pathology), to fill vacancies in the U. S. Public Health Service, Ellis Island, N. Y., and Detroit, Mich., salaries ranging from $3200 to $3700 a year. Applicants must have M.D. degree from a medical school of recognized standing, in addition to two

years of specialized study or practice in human pathology. Applications must be on file not later than June 30 with the Commission, at Washington, D. C.

THE UNIVERSITY OF PENNSYLVANIA is planning to hold the annual Medical Alumni Reunion and Smoker, Friday and Saturday, June 13 and 14. An interesting program for both days has been arranged, and the following prizes will be awarded: a silver cup to the class having the most members present, to the oldest alumnus present, to the alumnus who has come the farthest distance, and to the oldest class having the most members present. Alumni are requested to pay $1.00 on night of smoker (at entrance) and to register on cards provided.

THE SUGGESTION THAT BIRTH CONTROL CLINICS be "quietly established" in large cities of the country, notwithstanding laws to the contrary, was made in April by Mrs. Reginald Jacobs, chairman of the committee on meetings of the Pennsylvania Birth Control Federation, when she addressed a group of women at the College Club, Philadelphia. "I am convinced that if we test out the establishment of birth control clinics we will find them to be legal," said Mrs. Jacobs. Eventually these old laws now prohibiting the dissemination of such information will be sloughed off by their own ineffectuality.

THE CHARLES AND CARL EMMERLING MEMORIAL LECTURE was given May 13, by Dr. A. N. Richards from the department of pharmacology of the University of Pennsylvania. The lecture consisted of an extremely interesting description of "Recent Experiments on Renal Function." As a result of considerable investigation extending over a period of many years, Dr. Richards concludes that the most important function of the renal glomerulus is filtration. This conclusion is based upon a large amount of careful experimental work, and its significance as a factor in stimulating further research in the problem of renal function is obvious.

AT THE MEETING OF THE PHILADELPHIA HEART ASSOCIATION held May 7, the following program was conducted: "A Clinical Conception of the Development of Rheumatic Heart Disease," by Dr. Samuel A. Levine, senior associate at Peter Bent Brigham Hospital and instructor at Harvard Medical School; "The Spread of Rheumatic Fever Through Families," by Dr. John R. Paul, assistant professor of medicine at Yale University; and "The Possible Nourishment of the Heart Through Channels Other than the Coronary Arteries," by Dr. Samuel Bellett, member of the staff of Robinette Foundation of the University of Pennsylvania.

THE ASSISTANT PHARMACOLOGIST of the Food and Drug Administration, Marvin R. Thompson, U. S. Department of Agriculture, is the winner of the Ebert medal awarded by the American Pharmaceutical Association. The prize goes to the author who presents the paper contributing most to the science of pharmacy. Mr. Thompson, who is twenty-four years old, is the youngest man ever to receive the award. His paper on "The Pharmacology of Ergot" reported work he did in the standardization of ergot for strength, quality, and purity in connection with regulatory work of the Food and Drug Administration.

A SURVEY IS BEING MADE OF THE PENNSYLVANIA HOSPITAL and Jefferson Medical College and Hospital with a view to ascertaining whether it would be feasible for the two institutions to coöperate and make more efficient use of buildings and equipment. It is expected to result in the reduction of overhead expenses by eliminating duplication. Denial that a merger of the two institutions was under consideration was made by one of the directors of the Pennsylvania Hospital, saying the survey was purely an economic move and is being conducted with a view toward reduction of overhead and for the best interest of service to the public.

THE JOSIAH MACY, JR. Foundation for preventing and curing disease and relieving human suffering has been established through a gift of $5,000,000 by Mrs. Walter Graeme Ladd of Bar Hills, N. J., as a memorial to Mrs. Ladd's father. This new organization will have no hospitals or laboratories of its own, but will coöperate with existing social agencies and will support universities, hospitals, and laboratories already in use. It is understood the Foundation will not limit its work to any particular field, but will probably lean most strongly toward the development of methods to relieve the suffering of the mentally disordered.

DURING THE YEAR 1929 compensation payments increased approximately seven per cent as compared with 1928. During the fourteen years the Workmen's Compensation Law has been effective in the State of Pennsylvania, compensation payments were made or authorized in 1,012,718 cases. The total amount of this compensation liability was $166,607,621, including fatal, permanent disability, and temporary disability cases. The amount paid for medical, surgical, and hospital services, medicine, and supplies as required by law is not included in these figures and is estimated as amounting to approximately one-third of the compensation liability.

A GROUP OF UNITED STATES SENATORS will shortly sit across the table from medical men and research specialists and try to decide what program the government should undertake in seeking the cause and cure of cancer. Senator Harris, of Georgia, heads a new subcommittee of the Commerce Committee, which will look into the recommendations already made by many of the country's most eminent surgeons and laboratory workers. It is expected that many of those who have already written to the committee will appear in person for questioning and consultation. Surgeon General Hugh S. Cumming will probably be present at many of the meetings and will assist in shaping whatever plans are adopted.

AN ABSOLUTE BEQUEST OF $100,000 to the Hahnemann Medical College and Hospital, Philadelphia, and contingent provisions which may make the total gift almost twice that amount are made in the will of Miss Fanny Augusta Shortridge, who died April 19. The residuary estate, the value of which is unknown, is also willed to the hospital. The will directed that the outright legacy was to be used for erecting a dispensary to be known as "The John Henry Shortridge Memorial Building," in memory of her father. But the will was made in 1916, and foreseeing the possibility of the hospital's growth, the testatrix added that "if a dispensary building adequate for the needs and purposes of the said hospital shall have been erected prior to my death, I direct the said sum to be used as an endowment for the building."

DR. WARD B. WHITE, director of the New York State Bureau of Chemistry, has accepted the position of chief of food control, Food and Drug Administration, U. S. Department of Agriculture, effective June 2, to fill the vacancy caused by the death of Dr. R. W. Balcom. In Washington under his direct supervision will be the entire staff of the food control unit composed of chemists, bacteriologists, and food specialists. Dr. White will have general direction of and responsibility for the scientific and technical operations of the field force in applying the law to interstate shipments of food products. He will supervise the work involved in the improvement of existing analytical methods and in the development of new methods for the detection of new forms of adulteration.

THE BRONCHOSCOPE, heretofore used for removing pins, coins, and other foreign bodies, may prove one of the most potent factors in the battle against cancer by detecting its presence in incipient stages, according to Dr. Chevalier Jackson following research experiments made at Temple University, where he is professor of bronchoscopy. Bronchoscopic cancer research will be stressed in an extensive laboratory system to be developed at Temple, and exhaustive researches into

the question of the obstruction of the air passages in children, following diphtheria and other diseases, will be conducted. Dr. Jackson, inventor of the bronchoscope, made it clear that in the detection of incipient cancer by the bronchoscope, only the lungs, air passages, and stomach were involved, as it is to these places only that the instrument has access. Use of the instrument in administering radium to the affected tissues will provide another valuable aid in the treatment of the disease.

A HOME FOR INCURABLE CANCER VICTIMS, in which the patients will be cared for free, has just been opened in Philadelphia, Hunting Park Avenue and Old York Road. The foundation, operated by the Servants of Relief for Incurable Cancer Among the Poor, an order founded by Nathaniel Hawthorne's daughter, who devoted thirty years of her life to the care of poor victims of hopeless cancer, will be the first the order has opened outside of New York. The property comprises a substantial building and large grounds.

Accommodations will be provided for seventy patients, and in accordance with the rule of the congregation only those will be accepted who cannot afford to pay. There will be no distinction as to race, color, or creed, and no contributions will be accepted from any patient. The work is absolutely for the incurable cancerous poor. The only requirements for admission are poverty and incurable cancer.

OFFICIALS OF THE DEPARTMENT OF PROPERTY AND SUPPLIES, Harrisburg, hope to have the State's expensive building program either under contract or advertised by August 1. At least eighty per cent of the work will be under contract on June 1. The last Legislature appropriated a record-breaking sum for additional land and new construction at State-owned institutions. In addition, there was a considerable portion of the work started during the last biennium, uncompleted when the additional funds became available. A major portion of the construction is at welfare institutions to provide additional accommodations for the State's wards. The Legislature made available $10,084,601 for construction and land institutions coming under the Welfare Department during the present biennium. There were $1,667,000 appropriated for institutions for the feebleminded and $2,964,601 for State-owned insane hospitals. Most of this construction is under way and the department plans to complete as much as possible before the present administration sets down next January.

PRESIDENT HOOVER on May 12 awarded the Charles R. Walgreen prize of $500 for the winning essay in the Second Annual Gorgas Memorial Essay Contest, to Pauline Lodge of Lakewood, Ohio. In addition to the $500 received, $250 for travel expenses to Washington for the presentation will be included.

The subject of this year's contest was "The Gorgas Memorial; Its Relation to Personal Health and the Periodic Health Examination," and over five thousand essays were submitted from all parts of the United States. The objects of the Gorgas Memorial Institute, for the promotion of which the contest is held, are to (1) eliminate unnecessary illness and check diseases in their early stages; (2) increase the present average span of life from fifty-eight years to sixty-five or seventy by educating the public to submit to annual examinations; (3) eradicate tropical diseases; (4) eradicate mosquitoes which are both a pest and a health menace (malaria alone costs the country $100,000,000); and (5) free all the world from preventable disease.

UNDER THE DIRECTION of Dr. R. R. Snowden, the Pittsburgh Diagnostic Clinic devoted the entire day, April 30, to the presentation of a most interesting and instructive program of lectures and demonstrations by the staff. The subjects discussed were principally those which pertain to problems in diagnoses. Clinical methods and laboratory tests received equal consideration from the staff in an effort to evaluate and present a large number of diagnostic procedures. At the evening session Dr. Stewart Roberts, of Atlanta, Ga., discussed "The Heart, Gall-Bladder Problem." He reviewed the anatomical relationship existing between the nerves which supply the heart and those which supply the gall bladder. On the basis of this relationship he suggested the possibility of effects remote from the gall bladder resulting from a disease of this organ and due to wide transmission of nerve impulses along reflex paths. This conception was strongly supported by clinical reports of patients in whom cholecystectomies afforded complete relief from typical attacks of angina pectoris. Dr. Roberts has made a valuable contribution toward the solution of this problem.

THE AMERICAN COLLEGE OF PHYSICIANS announces the John Phillips Memorial Prize of $1500, to be awarded for the most meritorious contribution in internal medicine and sciences contributing thereto, under the following conditions: (1) The contribution must be submitted in the form of a thesis or dissertation based upon published or unpublished original work. (2) It must be mailed to the executive secretary of the American College of Physicians, 133-135 S. 36th Street, Philadelphia, Pa., on or before August 31, 1930. (3) The thesis or dissertation must be in the English language, in triplicate, in typewritten or printed form, and the work upon which it is based must have been done in whole or in part in the United States or Canada. (4) The recipient of the prize would be expected to read the essay at the next annual meeting of the College, after which he would be officially presented with the prize by the president. (5) The college reserves the right to make no award of the prize, if a sufficiently meritorious piece of work has not been received. (6) The announcement of the prize winner will be made not later than two months before the annual meeting.

ALTHOUGH HE SAID the effect of the treatment on humans could not be prophesied, Dr. E. S. Sundstroem, of the University of California Medical School, announced May 13 he had cured cancer in rats by low pressure treatment. Using low-pressure tanks in which atmospheric conditions of from 20,000 to 25,000 feet were simulated, Dr. Sundstroem declared he had effected a fair percentage of healings. When rats suffering either from cancer of the skin or of the internal tissues were subjected gradually to a low oxygen tension environment, from twenty-four to eighty-three per cent of the animals were definitely freed of their ailment. From twelve to twenty-two per cent showed apparent recovery. Dr. Sundstroem said that one of the possible dangers of the treatment existed in the fact that when insufficient care was taken in adapting the rats to the low pressure by gradual process, fifty per cent of them died. Three hundred rats were used in the experiment. Of these, 133 were subjected to the full treatment of from three to six weeks. Dr. Sundstroem said previous workers who had conducted experiments on the effect of lowered oxygen tension on cancerous growths have reported retarded growth and extensive destruction of cancerous tissue, but no positive cures.

AN INCREASE OF 3000 IN MOTOR VEHICLE FATALITIES in the United States during the year 1929 brought the total accidental deaths from all causes in the nation up to 97,000 for the year, it was announced April 26, by the National Safety Council. The 1928 figures for all classes of accidental deaths was 95,086. While the total of deaths through accidents for the year increased slightly less than 2000, deaths from automobiles alone reached a new height of 31,000, as against 28,000 for 1928. These figures tend to show that motor vehicle fatalities alone are on the increase, other types of accidental deaths showing a gradual decline. Accidents to children are increasing far less rapidly than to adult persons. Accidents in homes were responsible for the taking of 23,000 lives, while still another 20,000 persons lost their lives in public accidents in which the automobile was not involved. The principal cause of home accidents was falls, 9200 persons losing their lives in this manner. Burns, scalds, and explosions

accounted for the next largest number of home fatalities, while asphyxiation and suffocation were the third most frequent causes. Poisoning from carbon monoxid gas, caused by careless or ignorant persons permitting their automobiles to run in closed garages, was responsible for a considerable number of the asphyxiation deaths.

THE PENNSYLVANIA STATE DENTAL SOCIETY held its sixty-second annual session in Philadelphia, May 6-8, with more than 800 members from all sections of the State. Declaring that "too many teeth have been sacrificed needlessly," Dr. Alfred Walker, assistant professor of pulp canal therapy in the New York University College of Dentistry, protested against the removal of many so-called "dead" teeth. "The medical profession is not advocating ruthless removal, as it once did. Even when the pulp inside a tooth is dead and has been removed, the membrane on the outside continues to function normally, attaching the tooth to the tissue and maintaining circulation, and hence the tooth is not really dead. If all pulp from the inside of a tooth is removed, careful disinfection brought about, and the roots properly filled, nature will often heal the tissues and the tooth may remain useful. There are, of course, many instances when there is so much infection and where so much destruction of tissue has taken place that removal is the wisest policy." The following officers were elected: Drs. A. C. Young, Pittsburgh, president; H. M. Kirkpatrick, Harrisburg, and George A. Coleman, Philadelphia, vice-presidents; C. W. Hagan, Pittsburgh, secretary; M. M. Fintz, Philadelphia, assistant secretary; and James A. Brady, Philadelphia, treasurer.

A RECORD OF STEADY ACHIEVEMENTS in the campaign to conserve vision is outlined in the fifteenth annual report of the National Society for the Prevention of Blindness. "Let There Be Sight!" is the commanding title of the report which is being forwarded to members of the Society throughout the United States.

Trachoma, the disease of the eyelids which leads to blindness, continues to baffle the best minds of ophthalmologists. Renewed impetus to research into the mysteries enshrouding it was given through a five-year program of investigation started recently by the Medical School of Washington University, St. Louis, and financed by the Commonwealth Fund. In addition to coöperation with the federal trachoma clinic at Rolla, Mo., during 1929, the National Society for the Prevention of Blindness assisted several other agencies in a study of the incidence of trachoma among the Chippewa Indians of Minnesota.

Concerning the formation of the International Association for the Prevention of Blindness at The Hague last September, the report states:

"It is noteworthy that this world-wide effort was inspired and accomplished largely through the example of efficiency and effectiveness on the part of the American National Society for the Prevention of Blindness. The international organization was established after a joint study by the American Society and the League of Red Cross Societies regarding the international aspects of sight conservation. Twenty-five countries and numerous interested bodies, including the League of Nations, were represented at The Hague conference.

PRACTICING PHYSICIANS of Allegheny County, Pennsylvania, are to be given preference in the award of scholarship aid under the terms of the Oliver Rea Scholarship Fund, according to announcement made last week by the Directors of the New York Post-Graduate Medical School and Hospital of New York City, which has this fund at its disposal. The donor of the fund is a Pennsylvanian—Mrs. Edith Oliver Rea, of Sewickley, and in the original deed of gift, she has specifically petitioned that other things being equal priority in the scholarship awards be given physicians from her home county.

The fund is designed to promote advanced medical education and research in the United States, to stimulate and train teachers in medicine and surgery, and in other ways to increase efficiency in the practice of medicine and surgery. Special attention is to be paid to work in internal medicine, particularly the study of diseases of unknown etiology. There are also to be established scholarships to defray the expense in part, or in full, of the tuition of physicians at the New York Post-Graduate Medical School and Hospital, and a part of the income is to be used to provide salaries for scientific workers in medicine and surgery, or to establish prizes for valuable contributions to medical literature, or in any other manner to promote postgraduate education.

The directors of the fund have bespoken the coöperation of the officers of the medical societies of the State of Pennsylvania and Allegheny County as well as the medical boards of some forty-four hospitals in Allegheny County in recommending names of really deserving physicians whose responsibilities would otherwise make it difficult for them to meet the whole cost of postgraduate study. Under the provisions of the endowment, the remission by the New York Post-Graduate Medical School of a certain portion of tuition fees for postgraduate study is made possible to men of personal and professional standing in the community.

THE FIRST STEP TOWARD ESTABLISHING IN BROOKLYN one of the world's great medical institutions was announced April 26 by officials of the Long Island College Hospital. The plan, which includes separation of the Long Island College Hospital from its Medical School, calls for the organization of a new medical college to be associated with nine Brooklyn hospitals. The physical equipment of the combined units will cost more than $100,000,000. The new institution for which a board of trustees has already been chosen will apply shortly for a charter as a medical college. The board has already voted the first $500,000 toward an endowment fund to meet the educational law requirements for the organization of a collegiate institution in New York State.

The name of the new institution has not yet been decided upon, although the trustees are considering the title, Long Island College of Medicine, at the behest of the alumni of the old medical school of the Long Island College Hospital. The hospital will probably be named the Long Island Hospital.

The plans for the new college include the erection of a central building which will be located in mid-Brooklyn and be easily accessible to the hospitals involved in the plan. The site has already been selected. The building which is to be erected within the next five years will cost more than $3,000,000. When completed, the central plant and its affiliated hospitals will take care of at least 400 medical students. Courses in the first two years will be given at the central building. In the last two years students will receive instruction at the central plant and at the affiliated hospitals. These arrangements will make more than 4600 hospital beds available for teaching purposes. These figures do not include the plans for the future expansion of the hospitals. At each hospital where there is a teaching unit, members of the staff will serve on the medical school faculty for instructing students. This will mean the enlargement of the present faculty, most of whom will be retained, according to the officials of the old college.

The formation of the new board is the result of planning which began two years ago. At that time a group of prominent Brooklyn citizens decided to see what could be done to further medical education in Brooklyn and how the clinical facilities of the borough could best be used for teaching. At that time also the authorities at the Long Island College Hospital had been considering expanding their institution. For a time the two groups surveyed the field separately and discussed the situation informally with each other. In December, 1929, the board of regents of the Long Island College Hospital appointed a survey committee including representatives of the board of regents, the faculty of the medical school, the Alumni Association

of the Medical School, and members of the special committee. This committee worked out the plan which is now under way. At a meeting of the board of regents of the Long Island College Hospital, held April 22, a resolution was adopted to sever relationship with the medical school and give up the charter. Immediately a board of trustees for a new medical college was authorized and formal plans for incorporation were made.

The severance of the Long Island College Hospital and its medical school ends a relationship which at its beginning in 1858 marked a pioneering attempt in the United States at uniting a hospital and medical school. —*N. Y. Times.*

UNSCRUPULOUS PRACTICES OF SO-CALLED PRIVATE DENTAL CLINICS, and the resort to misleading advertising by some members of the dental profession were condemned by Dr. Z. T. Jackaway, president of the Pennsylvania State Dental Society. Dr. Jackaway demanded that members of the society support a movement for legislation to curb these practices which he declared are damaging the standing of the profession. "The dental profession in common with other professions has its quota of unscrupulous and unprincipled individuals who are willing to exploit the public for personal gain," Dr. Jackaway declared. "I strongly recommend that legislation be enacted to regulate these private clinics, which in too many cases do not serve the purpose to which they lay claim."

Of the advertising practices that are being resorted to by some dentists, Dr. Jackaway said, there had come to his attention many examples of extravagant statements made as a bait to gullible persons, who once in the hands of these "unprincipled" members of the profession are charged large sums and sent away with unsatisfactory work. We are urging that the proper laws be enacted to stop this sort of thing, as a measure for protecting the public. Many of these men profess to offer the benefits of new discoveries and treatments which either do not exist or consist of elements harmful to the patient. Steps for a reorganization of the society to better adapt it to the needs of the present times, were taken at a meeting which preceded the annual sessions. These plans were presented to the convention by Dr. Jackaway.

Tendency of the State Department of Public Instruction toward assuming many of the functions that have been carried on in the past by the State Dental Examining Board was condemned, during the opening sessions of the meeting and the proposal for a National Board of Dental Examiners was endorsed. Plans for a national dental survey, undertaken by the American Dental Association, to continue over a five-year period, were presented. The object of the survey will be, it was announced, to learn on a national scale, facts relating to the economic problems of dentistry and the relation to the larger community situation. Whether the dentist is receiving adequate return on the basis of hours worked; what proportion of the population is receiving dental care and what the structure and functioning of dentistry is in relation to the social whole.

THE AMERICAN ONOCOLOGIC HOSPITAL, Philadelphia, is situated at Thirty-third Street and Powelton Avenue. All modern plans, in regard to the care and treatment of cancer, recommend that special hospitals or cancer centers be established because the equipment, organization, and medical specialism required are so varied that it is impossible to supply the proper treatment except in a group unit devoted to the service of cancer alone. Such group units exist at the Memorial Hospital in New York, in the Huntington Memorial Hospital in Boston, and in many places in Europe. They comprise hospital service, research activities, and a group of eminent medical specialists to treat the various phases of the disease. Philadelphia has great need for such an organization to be a nucleus for cancer control and a center for the dissemination of knowledge relative to the disease.

The American Oncologic Hospital has seen the need of a greater organization for the care of cancer patients and for the creation of a Cancer Control Center. To this end the hospital has reorganized itself with the aim of greater facilities to fulfill the purpose of complete and efficient treatment of cancer patients. The pathologic and research work of the hospital has been taken over by the Cancer Research of the Graduate School of Medicine of the University of Pennsylvania. This Research has planned and established laboratories and will maintain a research force as well as do the routine pathology of the hospital. The organization of the Cancer Research of the Graduate School of Medicine is as follows: director, Dr. Ellice McDonald; Executive Committee—Dr. Ellice McDonald, chairman; Dr. George H. Meeker, dean of the Graduate School of Medicine; and Dr. W. F. G. Swann, director of the Bartol Research Foundation of the Franklin Institute; Board of Scientific Directors—Dr. Ellice McDonald, chairman; Dr. George H. Meeker, secretary; Dr. W. F. G. Swann—for physics, Dr. Eugene L. Opie —for pathology, Dr. C. E. McClung—for cell studies, Dr. John A. Kolmer—for immunology, Dr. Martin Kilpatrick—for chemistry, and Dr. George M. Dorrance—for patient activity.

In addition to maintaining a laboratory at the Oncologic Hospital, this Cancer Research also maintains a Central Laboratory at 133 South 36th Street, and another laboratory at the Philadelphia General Hospital. It is expected that this research will coöperate with the Oncologic Hospital in every possible way to aid in the development of its reorganization and in the general care of cancer patients. The Oncologic Hospital has established a Diagnostic and Tumor Clinic with Dr. George M. Dorrance as chief of the clinic and the following new appointments have been made as associates upon that staff: Drs. Damon B. Pfeiffer, S. E. Tracy, W. H. Spencer, J. B. Ludy, J. W. Bransfield, and Joseph McFarland. A new medical director to the hospital has been appointed, Dr. B. A. Hughes.

For the purpose of this new Diagnostic and Tumor Clinic a building has been constructed which will house the outdoor clinic on the first floor and the laboratory on the second floor. As a great number of patients who come to such a clinic do not have cancer, but require careful examination and diagnosis, a diagnosis of all patients will be made and appropriate laboratory studies and examinations done so that the noncancer patient may be referred to the proper hospital for his particular need.

The hospital is constructing a new building for x-ray and radium treatment and equipping this with new and elaborate apparatus. There will be established a new radium emanation plant, new physics research laboratories, new photographic laboratories for the study and record of conditions of the disease, new follow-up records, new social services, and new library facilities. It is planned to make the hospital a center of cancer study and treatment not only for the city of Philadelphia, but for the State of Pennsylvania and adjoining areas.—*The Weekly Roster and Medical Digest.*

IN AN ARTICLE, "The Development of Commercial Aeronautics and of the Airplane Ambulance," Lieutenant Colonel L. H. Bauer, in the *Military Surgeon,* states that the great use of ambulance airplanes in future wars will be in the rapid transportation of wounded and the transporting of cases which have heretofore been considered nontransportable because of the severity of their injuries. Transportation by airplane involves little or no shock. That airplane ambulances will also be recognized as useful in peace time in the transporting of sick or injured from isolated points to where they can receive adequate medical treatment seems sure. Before this can be realized, however, proper landing facilities in the near vicinities of hospitals must be acquired and developed. The medical profession as a whole can aid this proposition by familiarizing itself with the whole subject of the airplane ambulance.

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Prostatism[*]

THE PATHOLOGY OF PROSTATIC OBSTRUCTIONS

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I wish to draw for you, in a very brief way, the picture of the various pathologic conditions to which the prostate is subject and that demand our surgical consideration. There are, however, three desiderata one must appreciate before entering on this subject:

The first is the actual realization that symptoms are ever the same. That array of urinary, sexual, and referred symptoms that arise from bladder dysfunction and prostatic irritation are so constant in their recital that long ago they were grouped under the one term of prostatism to save, if nothing else, their constant reiteration. No matter what the pathology present, there are no single symptoms, or group of symptoms, that are recognized as pathognomonic of a specific type of lesion or pathologic change that may be present in the prostate to produce them.

The second point to be grasped is that the surgical diagnosis is made, not upon the symptoms, but upon the signs which the surgeon seeks at the time of his examination—needless to say that this examination should be thorough, and as some of the pathologic changes can be distinguished only by a study of the bladder orifice, it is essential that cystoscopy be included in this examination. I realize that some oppose this point of view and that occasionally a reaction occurs that may be regrettable, but better that than an ill-advised, or an unnecessary operation be performed.

The third desideratum bears further on this very point, and is based upon the surgery of today, for it has so varied its armamentarium and its approach that the acceptable teaching of today is, as our diagnosis varies, so does our surgical handling, and what is excellent for the cure of one pathologic entity, is either impotent or improper for the cure of another.

Differences will occur in personal operative technic, borderline cases will raise questions of propriety in a few selected cases, and complicating symptoms occasionally may vary the choice of attack, but underlying the great majority of instances, one will find here, as ever in surgery, that an accurate preoperative diagnosis, based on an appreciation of the surgical pathology present, will be the guiding principle to the surgical therapeutic endeavor.

Three major pathologic entities may be detailed (major, because of their greater frequency) and three minor ones, that depend upon surgery for their cure. The three major pathologic changes are glandular hypertrophy, median bar formation, and carcinoma, and I will touch upon them in that sequence, it being at the same time the order of their frequency.

GLANDULAR HYPERTROPHY

When we take stock of our knowledge of the actual pathology of this frequent lesion, we are more struck by the paucity of that knowledge than by our recognition of its behavior. We do not know its etiology or *why* it occurs. We do not know the location of the original growth, or *where* it starts. Nor do we find any unanimity of opinion whether it be a hypertrophy, or a hyperplasia, or *how* it progresses. It is an example of how clinical treatment has outrun the basic sciences of fundamental knowledge.

We know we have a racemose gland with five more or less definite glandular masses. I believe I can prove to you that the enlargement may originate and be limited to any one, or any group of these glandular areas. That certain types of proliferation are frequent and others are rare is but natural. These variations limit themselves to the glandular masses mentioned, and occur as enlargements of either right or left lateral lobe, the posterior commissural tissue, the subcervical gland of Albarran, with occasional hypertrophy in the posterior lobe, or in the anterior commissure.

Microscopically, prostatic hypertrophy is uniformly the picture of an adenoma which in its

[*] Read before a joint meeting of the Section on Surgery and the Section on Urology of the Medical Society of the State of Pennsylvania, Erie Session, October 2, 1929.

growth forms a false capsule by pressure from centralized proliferation and this false capsule is the line of cleavage which makes enucleation possible.

A word further as regards cases of recurrent enlargement, a number of which are being reported. They must be due to one of two causes: First are those cases in which the primary operation failed to remove all the adenomatous proliferation, the remaining portion continuing its growth to the development of obstructive symptoms. The second cause is based upon the appreciation of the fact that hypertrophy must start at some point. Following this to a just conclusion and realizing that the hypertrophy may occur in different parts of the gland, certain it is that it does not burst into proliferation in all these parts at one and the same time, any more than that the size of the hypertrophy and the patient's age are synchronous phenomena. Therefore, it is just to conclude that hypertrophy of one glandular mass may start in one decade and grow to the point necessitating surgical removal and in the subsequent decade another part may repeat the same process. This latter reason for secondary operations will be better understood when our knowledge of the etiology and the location of hypertrophy is perfected.

Median Bar Formation

The first requisite in speaking of median bar formation is to appreciate the varying nomenclature under which this pathologic change has been described. Some have given it a title which indicates its clinical picture, and we find it called "contracture of the vesical neck," "prostatisme sans prostate," or "prostatism in miniature." Others have coined a title trying to depict the pathologic change present, and have called the condition "sclerosis of the internal sphincter," "atrophy of the prostate," "fibrosis of the vesical orifice," etc. Median bar formation, besides being the term first used to describe the lesion (Guthrie, 1831), also avoids both the above errors, and leaves us with an unhampered title to this pathologic entity.

Its pathology is a fibrosis, which by its inevitable shrinkage stenoses the bladder orifice, produces residual urine, and gives all the symptoms of prostatism. All evidence points to this fibrosis, being the result of long-standing prostatic infection, and there is no evidence to gainsay such as the probable etiologic factor.

Prostatic Carcinoma

The pathology of prostatic carcinoma has advanced but little in the past decade. Microscopically, the vast majority are true adenocarcinoma and the startling feature is the early age at which some of these cases are being found. From work recently completed in the Urological Department of the University of Pennsylvania, it appears that many cases heretofore considered round-cell sarcomas of the prostate are really carcinoma manifesting high grades of metaplasia. This study was prompted by observing a prostatic tumor in a lad but eighteen years old, and our clinical diagnosis wavered between sarcoma and carcinoma. At autopsy, sections taken from the prostate were called round-cell sarcoma, as were also those from the chain of abdominal lymph nodes. Not until sections were studied from a metastatic nodule in the head of the pancreas did the true alveolar structure of the tumor manifest itself, to prove that it was carcinoma throughout. Youth, with rapidity of growth, had completely altered the usual picture and metaplastic forms of cells had grown that defied interpretation. Thus, though we may have spindle-cell sarcomas in the prostate arising from the connective tissue structure present, it becomes doubtful, on the other hand, if there is any lymphogenous tissue present in the prostate from which a true round-cell sarcoma could grow, with the one exception in cases of rhabdomyosarcoma.

For many years carcinoma of the prostate was thought to have its origin primarily in the posterior lobe, but today it is recognized that it may start and involve any portion of the gland. We have studied one interesting case in which the malignancy was limited to an enlargement of Albarran's subcervical gland. Grossly, one appreciates two types of carcinoma; in one the growth proliferates on the surface more rapidly than elsewhere, and the bladder neck and base exhibit an early submucous proliferation. In the other type, the mucous surfaces are spared and the malignancy remains intracapsular until blood borne metastases occur, or by the direct proliferation, the neoplasm invades the musculature of the bladder wall and the retrovesical area.

These, therefore, are the three major, clear-cut, pathologic entities. It is remarkable how rarely the clinical picture is clouded by double, or borderline cases. Though when one thinks of the pathology it is easy to understand, for one is a hypertrophy, the second an inflammatory fibrosis, and the third a carcinoma.

It may be asked how this influences or affects our surgery. Again, the answer is remarkably clear-cut: enucleate the hypertrophy; incise the fibrosis; and radiate the malignancy. The methods of procedure may be varied as much as is wished, but these fundamental principles do not vary.

The three minor pathologic changes (those less frequently seen) that may produce urinary obstruction and give the clinical picture of prostatism are abscess, cyst, and benign fibromata.

Abscess of the prostate is usually an acute fulminating process, that paints its clinical picture in the rubric of Celsus: "Dolor, color, rubor, tumor, et functio laesa." Occasionally, however, these usual accompaniments of infection are absent and one has a cold abscess. Most surgeons of experience have stumbled upon such, at some time in their career, when they expected to enucleate a hypertrophy. Asymmetry may or may not be present.

Cysts of the prostate are rare, but when present, can be markedly obstructive. The cases that I know of have all been unilateral and in this feature should lie their diagnostic differentiation.

The writer has seen one clinical and one postmortem case of *benign* fibromata of the vesical neck. Each of these gave unquestionable evidences of urinary obstruction, and in each a rosette of true fibromata clustered about the internal urinary meatus, varying in size from 8 to 12 mm. in diameter. It is my belief that they were prostatic in origin and it is also interesting that both cases occurred in the negro.

These six pathologic conditions are the causes of chronic urinary obstruction, and comprise the entirety of the share of the prostate in causing such symptoms. The subject, however should not be left without mention of the rôle that spinal lesions play in producing urinary stasis, and one should appreciate that such can simulate prostatic obstruction in all its clinical aspects. Hence it is that one reiterates the necessity of the most searching and painstaking examination, including cystoscopy, on all such patients.

Medical Arts Building.

PROSTATIC OBSTRUCTION FROM THE GENERAL SURGEON'S POINT OF VIEW

FRANK R. BAILEY, M.D.
PITTSBURGH, PA.

With the onset of the chilly fall days we have noticed and now count upon our usual fall run of prostatic-obstruction patients. They are with us constantly and in varying numbers until the following summer days and even then one can almost always number an occasional one among his patients. Therefore, the general surgeon is frequently called upon to step into that field of the more specialized branches of surgery to care for his patients suffering from prostatic obstruction even though there is a urologic department functioning in any given hospital. Again, any general surgeon who will successfully care for his cases of prostatic obstruction and obtain satisfactory results for his patients will find that before long this particular field of his work will grow in an almost surprising way. Of all the patients we are called upon to care for, with a very few exceptions, there are none more appreciative of one's efforts and results than those unfortunate beings who after going through the discomforts of obstructive urination are finally relieved and able to perform this most essential act in a free and normal manner.

The basis for the following remarks is taken from an analysis of our own hospital records.

Prostatic obstruction is often called an old man's disease and being classified as old carries with it the general idea of one with his vital functions about in their last stages. In spite of this widespread idea, age and prostatic obstruction have no direct relationship to each other. Some of our nicest results and most easily handled patients were in the late seventies and up to eighty-six years of age. On the other hand, some of the most trying patients to deal with were in the early sixties. One can, therefore, depend on the statement that age has nothing to do in successfully handling these patients but that one's results are in direct proportion to the physical condition of the patient at the time of the urinary-obstruction troubles.

As for the duration of symptoms, such as difficulty in starting the stream, small stream, frequency (especially at night, disturbing rest), dribbling, and other allied complaints, one is surprised at the length of time these patients go along with definite symptoms before consulting some one in regard to their relief. Of course a few become alarmed and seek advice early, yet the average time from the onset of these definite symptoms until advice is sought is four years, and during such a period many things may very easily develop which not only makes it harder for the patient but more difficult for the surgeon to successfully treat.

Of all the symptoms that these patients have there is one that drives them to their medical adviser at once and that is their inability to empty the bladder. It is really surprising how many men will stand for all sorts of discomforts and keep them quiet, yet, when it comes to the act of emptying the bladder, they are only too willing to seek relief in any manner that may be suggested even though they question its propriety.

It is also characteristic of these patients that if relieved for the time being, by no matter

how questionable a procedure, or by the subsidence of inflammation about the prostatic urethra with a definite obstruction still present, they again drop back into their false idea of well-being and waste much valuable time. The various procedures that have been resorted to in such conditions will not be discussed, except to mention the use of the catheter. In over sixty per cent of our patients there was the history of the use of the catheter at one or more times, and in a number the constant use of it since the onset of obstruction. Such occurrences only mean that serious trouble is in store for those who procrastinate with such measures and that the safest advice to give such a man is to seek relief for the cause of his trouble in place of depending on symptomatic treatment. The urine obtained by the catheter is not always an accurate index of the actual state of affairs present in the bladder for the simple reason that a vesical projection will form a pocket in the bladder in which urine collects and which can go to almost the actual pus stage yet show at the worst a slightly infected urine by catheter.

It is at such times that the cystoscope properly handled will show one the actual conditions present and will do no harm. The size of the gland can be determined, the type of obstruction present and the condition of the bladder mucosa. Also, if conditions permit, the ureters can be catheterized and the functional tests carried out on the kidneys themelves.

Neither catheterization nor cystoscopy should be done promiscuously. One should bear constantly in mind that the urethral mucous membrane is an extremely sensitive structure and that any undue amount of traumatism is absolutely contraindicated. In our cases, catheterization alone emphasized this fact. Many of these men were admitted to the hospital with a urethra so extensively traumatized that our hands were tied so far as caring for them by known and accepted procedures. The prostatic urethra especially being abnormal in size and location as well as changed by inflammatory processes was the chief part to suffer from extensive and forceful manipulation by instruments. Not a few patients came in with marked bleeding from the urethra and numerous ones with a bladder so distended by a hemorrhage into it that radical measures were required for its correction in patients who were not physically in condition for surgery. In this group were several patients upon whom a false passage had been made. To properly pass an instrument in some of these patients is truly an art.

Aside from local conditions met with in the bladder, the most important factor from the surgical point of view is the condition of the kidneys. It is a notorious fact in prostatic obstruction that sooner or later kidney function is damaged and the successful management of a prostatic case surgically depends primarily on kidney activity. One can manage bladder conditions comparatively easily and satisfactorily but not so with kidney infections and degenerations. Careful study is required often in coöperation with the medical side and a carefully planned and systematic course of medication and diet is quite essential to make an extremely poor operative risk into a reasonable one. Blood chemistry determinations of nonprotein nitrogen, urea, uric acid, and sugar serve as an important guide in the progress, not to mention the usual functional kidney tests. Because the general cardiovascular apparatus is so closely wrapped together with renal changes this phase of one's patients necessarily should receive ample care and attention.

In the preliminary care of these patients, one has to resort to various plans of procedure depending on existing conditions. Any set routine to apply to all patients will meet with a fairly good percentage of failures. Permit me to mention just a few of the problems arising in this preliminary care. The use of the indwelling catheter not only to give relief to the patient but to permit of local attention to the bladder, ideal as it may be, can not always be used. In our own patients a surprisingly large number had it tried but with a complete failure. The failure was due to the inability of the patient to tolerate the catheter and this inability was practically always due to a urethra that had been, prior to admission to the hospital, more or less brutally treated by one with the best of intentions in trying to relieve his patient of an over distended bladder. Therefore, in our experience, overtraumatized urethras do not tolerate the indwelling catheter. Again, from the same causes, hemorrhage, be it urethral or running back into the bladder from the prostatic portion, is not always suitable for an indwelling catheter. Some of our patients presented hemorrhage into the bladder from ulcerative processes caused by an enormous adenomatous gland with the resulting poor blood supply. In such cases the indwelling catheter did not suffice. Three of our patients in this particular condition required an emergency prostatectomy, thereby completely removing the gland with its ulcerative area from which the secondary hemorrhage was coming, to control the bleeding, not to mention the life, of the patient.

Bladder irrigations are of importance in some patients and can be used daily. Such a proce-

dure demands a fairly good urethra to start with and the utmost of care in the performance. Even with every precaution such irrigations frequently become so distressing to the patient that they must be abandoned. The reaction of the urine has been a help in these infected bladders. Usually an acid urine is most desirable, yet in some instances a quick change from acid to alkaline and back again seemed to favor a more rapid subsidence of the cystitis.

Much has been written in favor of the two-stage suprapubic operation and the same for the perineal method of approach. It has been suggested that the type of operation should be based on the type of gland present. This should be determined during the course of preliminary study. The rectal examination will always reveal, whether there is any marked projection in this direction, but it requires the cystoscope to determine intravesical projections. It may be interesting to note that in our own cases sixty-eight per cent had the rectal projection most marked, leaving thirty-two per cent with little or no rectal projection, but by cystoscopic examination a definite vesical projection was found responsible for the obstruction. From these figures one might say that the perineal operation should be the most frequently used.

If, by training and experience, the surgeon is equally adept in these two methods of approach then he is qualified to choose. For the general surgeon, however, the writer is among those who strongly advocate the two-stage suprapubic, feeling that, with the type of patients that one sees on a general surgical service, such a plan offers the best results. As already intimated, most of our prostatic cases are late, after a cystitis has existed for a long time, and with the natural resulting kidney infections of pyelitis, pyelonephritis, and entirely too frequently a pyonephrosis. It is quite customary for us to find the kidney function definitely impaired and many have been so handled prior to admission that nothing short of a suprapubic cystostomy will give the patient the desired relief and at the same time permit the surgeon to clean up existing infections and have ample time to get his patient back as near to normal as possible. A suprapubic cystostomy can be done easily under local anesthesia. If forced to do it on patients who have an overdistended bladder, a purse string in the bladder around a Freyer tube with a clamp on the tube will keep a distended bladder full and permit of a slow relief of back pressure on the kidneys over a period of days, and thereby avoid any acute suppression of urine or other unagreeable troubles from a too rapid emptying of the bladder. Again if the patient is in a bad physical condition and not gaining properly, a Pezzer catheter can be fitted into the incision and the patient sent home under proper medical care until such a time as he is physically fit for the prostatectomy. We have been compelled to send patients home, as just described, for periods up to three months and have them return for a successful second-stage prostatectomy, because such a procedure would have met with an almost certain mortality had it been attempted earlier.

Three per cent of our patients had vesical calculi present in conjunction with their prostatic hypertrophy. Whether these were primary and independent of the prostatic condition, or whether they were secondary and caused by a cystitis on a prostatic basis, we were unable to determine; although the latter is more reasonable. The cystostomy, however, here served two purposes.

In our experience we have had several patients who having gone through a perineal operation yet came seeking relief from prostatic obstruction produced by an intravesical projection not removed, or for weakness and incontinance of the vesical sphincter. The cause of such a state of affairs is well-known. Therefore, to repeat, the writer feels that, for the general surgeon, the two-stage suprapubic operation offers the wider field of usefulness, is more safe to use, and is much more flexible in its possibilities as far as advantageous results to the patient are concerned.

In this group of patients we have classified five per cent under the term contracture of the neck of the bladder. They presented a miserable clinical picture: extreme pain and frequency; small, extensively hypertrophied bladder wall, with very marked cystitis, some almost of a suppurative type. The rest to the bladder and its accessibility to treatment, not to mention the comfort to the patient by cystostomy, with a later surgical correction of the obstructing element, was successful in all. Because of the tendency of this fibrous tissue to contract even after the removal of the primary obstruction, it is wise to have these patients return from time to time for the simple passage of sounds. It takes only a few minutes of the patient's time every few months after the prostatic urethral channel has been reëstablished and will keep these men out of more or less serious trouble should they fail to coöperate.

It has been our custom to use the Cathcart siphon apparatus between stages. It not only keeps these patients dry but facilitates in handling bladder conditions and indirectly the kidneys. Hourly irrigations by the nurse in charge

have often been insisted upon when indicated. In fact proper and efficient nursing is almost half of the success in many of these bad surgical risks. Forcing fluids in these men who by training have acquired the habit of limiting fluid intake is most essential. Here again a competent nurse is invaluable. If the patient is absolutely intolerant to fluids by mouth, because of kidney dysfunction and its resultant toxic state, we have repeatedly kept these patients on a continuous hypodermoclysis of normal salt solution for as long as ten days, reinforced occasionally by intravenous glucose injections, and had the pleasure to ultimately see them emerge from this most distracting state.

If a suprapubic opening has been made, a gauze pack is always placed in contact with all raw surfaces, and it should be insisted that this be left alone. By waiting until it falls out of its own accord, we are always insured of a clean, healthy granulating wound. Occasionally some overambitious house physician has removed such a packing and the resulting phosphatic sloughing incision is indeed horrible to behold and equally disliked by the patient.

It has been our custom to get these patients out of bed as early as their physical condition justifies. It is a well-known fact that older people do not tolerate being held in bed over long periods and prostatic patients are no exception. We have often disconnected the siphon apparatus to get these patients out of bed and started its use again on their return. Should the bladder tube fall out of its own accord, the ordinary bladder irrigations are insisted upon as usual to insure a clean part.

The second stage should be done only when the physical condition of the patient justifies. Such can be determined by the clinical picture as presented by the patient and backed up by the customary laboratory findings to confirm such a state.

Formerly nitrous oxid and a local infiltration of the prostatic bed with novocain plus adrenalin gave a satisfactory anesthesia for the enucleation of the gland. Lately, however, with spinal anesthesia and its satisfactory usage in many branches of surgery, its application to prostatic work has been almost ideal. Unless one is qualified to know and handle spinal anesthesia in all its various clinical manifestations, unhappy results may be avoided in prostatic work by the use of other forms of anesthesia.

Hemorrhage and surgical shock are the two things to be considered. Hemorrhage can be successfully handled either by the use of a gauze packer specially constructed on a catheter which exerts a wider and more firm pressure in the prostatic bed, as we prefer, or by the use of one of the popular rubber appliances. Quite frequently the bed is so dry as to require nothing of a foreign nature and if so the patient's postoperative comfort is increased because of the absence of any foreign body in the neck of the bladder. Shock can be controlled by having your patient in the best physical condition possible and by a quick, concise, and neat enucleation of the gland, always bearing in mind that there is one plane which is the least vascular and permits of a clean enucleation. The second stage done at the proper time finds, as a rule, a rapid and uneventful recovery. Bladder irrigations are insisted upon after the second operation, until such a time as the wound is sufficiently healed to make them difficult, or when the bladder is clean of all debris coming from the prostatic bed. It has been our observation that surgically the cystostomy, although being the more simple operation, is attended with more troubles because of the complications required to be dealt with and the physical condition. The prostatectomy, on the other hand, although of greater importance surgically, finds the patient on a rapid road to convalescence owing to his improved physical condition due directly to the benefits derived from his preliminary operation.

It is interesting to note the peculiar mental attitude of these patients while going through this procedure. Depressions are quite marked in many instances since they are unable to void in the normal way. One can almost invariably tell, however, on his first glance at a postoperative second-stage patient if, since the last visit, he has had desired results. Several of our patients went into a definite exhaustion psychosis at various times in their hospitalization. Such a condition is more annoying than dangerous although it is possible for it not to clear up.

Our incidence of vesical fistulas has been cut down to nothing since substituting the incision through either rectus yet retaining the midline bladder opening for the former entire midline incision when we did have a few persisting tracts with enough bladder mucous membrane proliferated outward to require further surgery for their closure.

Epididymitis is a most distressing symptom to the patient but not serious. It occurred in about fifteen per cent of the patients, being bilateral in three per cent and went to suppurative stage in only one patient. It usually occurs after the patient first voids normally and is due no doubt to a small drop of urine gaining access to the epididymis through the torn end of the vas. It usually makes itself known by

a chill and a sharp rise in temperature and is generally gone in five to seven days. Rest, elevation, ice, and forcing fluids are sufficient for treatment.

Several of our patients have died before we were able to do anything for them, being sent in to us in practically a moribund condition. Desperate as they were, we felt compelled to give others their chance, because of hemorrhage or extensive infected processes. These particular types should be looked upon more as in the general class of surgical emergencies, such as acute intestinal obstruction or ruptured duodenal ulcer patients. Desperate risks, though they are, yet the indications are definite for certain surgical procedures, and, unless attempted, a most certain mortality exists. Barring these so-called surgical emergencies which only too frequently and unnecessarily are thrust upon the general surgeon as a last hope, we come to the truly prostatic deaths. Cardiorenal failure, precipitated no doubt by operation in a patient with a very narrow margin of safety, accounted for the majority of the deaths and hypostatic congestion with its resultant pneumonia for the others. Nevertheless, the general surgeon who can keep his mortality list so low as four or five per cent need not feel ashamed when talking to the operative urologist.

The pathologist gives us some interesting information after the surgeon has finished with his part. Adenoma of the prostate furnishes us with the largest percentage of our work. Next comes the fibro-adenomatous type seen especially in those cases of long standing inflammation. Malignancy of the prostate, as we have seen it, occurred in about twelve per cent of our patients, and necessarily called for a different management.

The relation of the general surgeon to prostatic patients who come under his care is no different from his relation to the other types of patients he is frequently called upon to treat. We are constantly confronted with desperate situations. In prostatic work, however, there should be a difference and the writer desires to make a plea for an early diagnosis in these patients and, in place of allowing them to procrastinate and waste valuable time thereby becoming increasingly poorer surgical risks, to advise them of their folly, and of their good chances for complete comfort if cared for before permanent damage has resulted to their physical make-up, and to assure them that these obstructive troubles can be successfully and completely relieved, adding years to their lives. If this information can be satisfactorily broadcast, we can consider prostatic risks and mortality along with the most successful phases of our surgical practices.

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PREPARATION AND DETERMINATION OF THE QUALIFICATIONS OF THE PATIENT FOR OPERATION

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In attempting an evaluation of the factors that have contributed to the reduction in mortality in prostatic surgery in the past two decades, one must conclude that the outstanding factor is the preliminary treatment or preparation of the patient for operation. The recognition of the gravity of the secondary renal and cardiovascular changes and the institution of measures to restore them to a relatively normal functioning state have converted a surgical procedure, that in the writer's memory was associated with an appalling mortality, to one that today is relatively safe, with a very low mortality.

The renal problem of the prostatic is the problem of major importance in his preparation for surgery. The mechanism of the damage need not be discussed here. The damage may be entirely functional; there may be an associated organic change or such pressure and infectious damage that restitution is impossible. The problem is first to determine the damage; second, to institute measures to relieve the renal apparatus of its burden and reëstablish, so far as possible, a relatively normal renal function. In the estimation of the renal damage, the daily output, the night volume, its specific gravity, its capacity to excrete phthalein, the blood nitrogen and creatinin figures are extremely important.

In the obstructive nephropathies the parallelism of the nonprotein nitrogen and phthalein, as observed in the nonobstructive nephritides, is not seen. It is a very common observation in our clinic that patients may have a normal nonprotein nitrogen and little or no capacity to excrete phthalein. We invariably wait until the excretory power for phthalein has been improved before subjecting the patient to surgery. An additional observation is that high nitrogen figures (125 to 150), with a creatinin retention of 6 to 7, are not of necessity as alarming in the obstructive group as in the nonobstructive ones. The clinical manifestations are a fair index of the transient or permanent renal damage. The constitutional signs vary from a very mild to a very severe degree of uremia. The ones with severe renal dysfunction have a dry skin; the tongue is red, furrowed, and board-

like. (We have never seen high nitrogen retention or low phthalein in a patient with a clean, moist tongue. The appetite is usually impaired, and the patient is drowsy physically and foggy mentally.)

Management of these instances of renal damage consists in gradual decompression of the bladder by intermittent catheterization, an indwelling catheter, or a suprapubic cystotomy. In patients who have large residuals it is important that this be done gradually. One should be guided in choice by careful study of the particular individual. Patients who have small residual and but little or no renal impairment may be prepared by intermittent catheterization, although even in this group we have found that it is a mistake to subject them to surgery without at least a week to ten days of careful preparation.

In our clinic the prostate is removed under local anesthesia and the majority of the patients are prepared by the insertion of an indwelling catheter, the bladder is irrigated daily, and the catheters changed from time to time as indicated. Fluids are forced in large quantities—by mouth, bowel, subcutaneously, and intravenously, depending on the condition of the patient. In patients who have high nitrogen retention and low phthalein with the accompanying clinical manifestations, 250 c. c. of 25 per cent glucose solution, given intravenously, every fourth hour, has been found extremely helpful. At the same time fluids are forced by bowel or subcutaneously. There will always be a group that will require suprapubic drainage, as those who are intolerant of the catheter or in whom catheterization is difficult and very painful; the patient with massive residual and serious renal impairment, who requires a long interval of drainage before operation; or the patient with associated calculi.

Epididymitis is always a distressing complication to both patient and surgeon and may be responsible for a fatal termination in aged and debilitated patients. It occurs in from twelve to twenty per cent of cases either before or after operation. In our clinic, the aged and debilitated, the poor risk types, and the group with massive residuals with an uninfected urine of low gravity, a section of the vasa deferentia is performed on admission, before instrumentation of any sort is started; the latter group always develop cystitis, no matter what method of decompression is used. They always have serious renal impairment and require long intervals of drainage before operation. Section or ligation of the vasa deferentia for the prevention of epididymo-orchitis in prostatitis has been advocated and practiced for a number of years. Having no information as to how generally it has been a routine procedure in this country, the writer addressed a note to Dr. Hugh Young asking for his impression. In his absence, Dr. Colston replied as follows:

> My own feeling is that vasoligation should be done as a routine practice in cases of prostratic hypertrophy in which operation is necessary and that the ligation should be undertaken before instrumentation is undertaken. This ideal, however, is very rarely attained and for a vast majority of patients ligation is done at the operating table. Dr. Young does it in all his patients, at the operating table, except in younger patients. I do it in all cases and Dr. Frontz does it in selected cases. We have had no unfortunate complications with the method and have been rather surprised that we have never had a hematoma of any extent. We have had localized abscesses which drained through the needle hole. There have been a few cases in which epididymitis has occurred in spite of the ligation and I think in all frankness it is only fair to say that an open vasectomy is the surer way to prevent epididymitis, but vasoligation is so easy and so convenient and does not require any incision that we prefer it to vasectomy.

In a previous paper we stated that after careful cardiovascular studies of our prostatics we were impressed with the cardiovascular fitness, actual and potential, of the general run of prostatic cases. They have passed the age at which the severe types of heart disease, those of rheumatic and syphilitic origin, are found. In the victim of prostatism there is commonly a temporary cardiac break conditioned by the toxemia, loss of sleep, and great discomfort which attends disturbed urinary function, but with proper management the heart is almost always able to come back.

The presence of congestive failure in the arteriosclerotic heart is not so alarming as in other cardiacs in whom for years the heart muscle has been compensating for a mechanical defect, a valvular lesion or a vascular lesion requiring increased systolic pressure and finally broken down. The cardiovascular contra-indication is congestive failure.

In the management of this complication, rest, physical and mental, is essential. Sedatives should be used freely. The diet should be light. Fluid intake should be balanced between the two conflicting indications; one to spare the heart by restricting fluids, the other to flush the urinary tract freely because of the infection present. Our patients who have congestive failure receive between 1600 and 1800 c.c. of fluid a day, and are given a dram of digitalis daily for six days. The course of digitalis was usually concluded one week before operation, so as to avoid combined vagal and toxic effects associated with the operative procedure itself. The pa-

tients showing no congestive failure and giving no history which indicated circulatory embarrassment were not given digitalis. The question of abnormal blood pressure is seldom of moment. High pressure is infrequent. In such cases, digitalis is desirable. Provided there is no congestive failure and the peripheral circulation is well maintained, as shown by warm extremities, no attention need be paid to apparent findings of low blood pressure.

In discussing the preparation and determination of the qualifications for operation of the prostatic, one is conscious that there is little one can say that is new or perhaps even helpful. The underlying principles are thoroughly understood and practiced by most men doing prostatic surgery today.

To summarize as to the general care of the prostatic before operation, one cannot generalize or attempt a rigid standardization of his treatment. The patient should be studied and treated as an individual. Some will require but little preparation; others will tax the ingenuity of the nursing staff and doctors in their conversion from an extremely dangerous to a safe surgical risk. In the management of this group, we have been helped tremendously by advances made in the functional studies. As a rule the drop in the creatinin and nitrogen figures and the rise in phthalein are associated with improvement in the general physical well-being of the patient. There is an occasional exception in which there are no true indices.

A small group will have such permanent damage to kidney that nothing but palliative measures can be employed.

To conclude, preoperative treatment should consist of gradual decompression in the manner best suited to the particular case; fluids by mouth, by bowel, subcutaneously, or intravenously; 250 c.c. of 25 per cent glucose every fourth hour in the dangerously ill group. Patients who have congestive failure should be given digitalis, as previously outlined.

If, under such a régime, his general condition improves, the nonprotein nitrogen and phthalein approach the normal curve, he could be regarded as a safe surgical risk.

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PROSTATECTOMY

Choice of Operation, Technic, and Results

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One may sum up the history of prostatectomy by the statement that, since 1900, the mortality from this operation has been reduced from over forty per cent to about five per cent *when done by skilled surgeons.*

In the first decade of this period, while Freyer, of London, was doing many prostatectomies by the suprapubic route, Young, of Baltimore, was perfecting his technic for perineal prostatectomy and learning the extreme value of careful preoperative treatment. There is no doubt that the epoch-making work of Young stands as an imposing monument to mark the advent of the new and successful era in prostatic surgery.

Choice of Operation

Whatever choice there may be between suprapubic and perineal prostatectomies should rest with the surgeon. Some have tried to specify conditions which would indicate the one or the other operation; but in the average uncomplicated case of benign hypertrophy the surgeon's choice should be based upon his training and experience. The literature for the past twenty years is filled with heated discussions on this question regarding the choice of operation; but one can sum up the conclusion of all these discussions by the statement just made.

It is a fact, however, that the vast majority of well-trained and skilled surgeons prefer the suprapubic operation. They contend that the technic is much more simple; functional results are, on the whole, better; and such sequelæ as incontinence, persistent fistulæ, and recto-urethral fistulæ are prevented; but they admit that the mortality is slightly higher than by the perineal route.

Those who favor the perineal operation admit that the technic is much more difficult; but that, if one will take the time and trouble to thoroughly learn the anatomy of the male perineum, and study the proper technic, the operation will not be so difficult; and if certain precautions are carefully observed, unpleasant sequelæ will be no greater than with the suprapubic operation.

Three considerations, therefore, should be the deciding influence in making a choice: ease of operation; functional results; and mortality. Certainly, a choice based upon ease and simplicity of operation, regardless of the other two factors, is unsurgical; but to consider the saving of life at the expense of perfect function, or some inocuous sequel, is worthy of consideration.

Personally, most of my operations are by the suprapubic route, and for reasons already mentioned. From the experience that the writer has had with both operations, and from close observation of the work done by Young, from

whom he had the good fortune to receive his training, he cannot but feel that the criticisms of the perineal operation are not fully justified. The dangers from infection and hemorrhage are equal in both operations. By the perineal route, one is risking damage to muscle structures that terminates in poor functional results, as well as the always present danger of injury to the rectum; and no matter how skillful the surgeon is, he will have a number of such unpleasant sequelæ.

There are occasions, however, which call for judicious reasoning, and upon which perfect functional results might be sacrificed for prolongation of life with fair comfort. Such, in my opinion, include patients with thick pendulous abdomens, easily infected, and slow to heal; patients quite debilitated and who would not bear well long confinement to bed: and lastly, those cases of small hypertrophy, quite adherent, and requiring dissection. Such cases are probably better done by perineal operation, and with caudal anesthesia.

In this connection, the writer would like to express his opinion that the surgeon who is not thoroughly familiar with the technic of both operations, or is not thoroughly informed regarding the pathology of the prostate gland, *should not attempt prostatic surgery;* he will surely bring nothing but discredit upon those surgical procedures which have been devised for the relief of one of the most distressing of all human ailments.

The suprapubic route follows the most simple and direct route to the hypertrophied portion of the prostate, as the perineal route is the natural anatomical approach to the normal gland. This statement is based upon the fact that the hypertrophied portion projects into the prostatic urethra and bladder; is covered by a very thin mucosa; and enucleation, en masse, is quickly and thoroughly accomplished. The chief objection to this method is the longer confinement to bed, and discomfort to the patient because of sloppy dressings. Those patients whose operations have been by the perineal route are up in a chair on the fourth day, and have sufficient bladder control, by the end of seven to ten days, to keep dry.

Operative Technic

The preoperative preparation of the patient is, without doubt, the most important factor in obtaining the present low mortality from prostatectomy and it should be included as an actual part of the operation technic.

Removal of the vesical retention, restoration of renal function, and detoxication of the patient constitute the purpose of the preoperative treatment.

For bladder drainage, we are also divided into two groups: those who prefer the indwelling urethral catheter; and those who prefer a preliminary cystostomy, and two-stage prostatectomy. The writer has always preferred the indwelling catheter, and has found but few patients intolerant to it; in some instances the intolerance is *due to rough attempts at catheterization, especially with a metal catheter, before the patient is sent to the hospital.* When used correctly, it does not favor infection, but thoroughly drains the bladder, and finally enables one to do the prostatectomy in one stage, clean, and complete, with good visualization, and better healing. Furthermore, the one-stage prostatectomy is accompanied by no more shock or hemorrhage than the two stage. In fact, shock and hemorrhage are greatly reduced with local anesthesia. Intermittent catheterization, done carefully, may be used in certain patients who are intolerant to the indwelling catheter; but this requires the presence of a skilled attendant.

Epididymitis, a very dangerous complication, both before and after operation, can usually be prevented by simple ligation of the vasa deferentia. This should be done, routinely, very soon after the patient enters the hospital; and by the Alvea method which avoids cutting the skin.

This paper dwells upon only a few points regarding the technic of the operation itself.

In the first part of a two-stage suprapubic prostatectomy, if the bladder, stripped of its peritoneum, is opened high up, and tacked lightly to the recti muscles, injury to the peritoneum in the second stage can be avoided.

In both the suprapubic and perineal operations, one should guard against injury to the prostatic capsule and internal sphincter. This is best accomplished by using gentleness in the enucleation, and by always keeping the enucleating finger in the line of cleavage and pushing *against*, not *from*, the hypertrophied tissue. Injury to the capsule increases the hemorrhage, and favors infection.

Unpleasant results from perineal prostatectomy will usually be avoided if one will remember three warnings. First, be sure, in opening the deep perineum, to keep dorsal to the transversus perinei muscles so as to avoid the triangular ligament; second, identify, and bisect, most carefully, the recto-urethralis muscle, so as to allow the rectum to fall back away from danger; third, open the urethra at the apex of the prostate and not in the membranous canal, so as to avoid injury to the external sphincter and its resulting incontinence.

In the perineal operation, the writer prefers Young's original technic, consisting of parallel incisions through the prostatic capsule. Although it may be more difficult to remove a small middle lobe by this method, there is little or no danger of postoperative stricture, as may happen if a triangular flap is cut from the capsule.

Infection remains the greatest danger in both operations; and its control lies in its prevention, so far as is possible. For this our best allies are adequate drainage and the avoidance of rough manipulation of the bladder and the prostatic capsule. Penrose drains (without gauze) should be placed in the space of Retzius, and left there, if needed, for four to six days.

In spite of all precautions, blood-stream infections occur frequently, but are fortunately not fatal if quickly controlled. Scott has recently reported 34 such cases occurring within 2 years at the Brady Clinic, and all in perineal cases. It would be greatly to our advantage to have a similar investigation of such merit made in a series of suprapubic cases.

In this connection one should be warned against the too promiscuous use of the indwelling catheter after operation. It frequently starts serious infection by disturbing the infected prostatic cavity. The same holds true for meddlesome attempts at irrigation of the wound in either operation; for this not only stirs up the infection, but it also removes nature's protective coating.

Hemorrhage, next to infection, remains a constant threat, is often alarming, but, fortunately, is not a common cause of death. In both suprapubic and perineal cases, the advantage of local anesthesia is that it removes the need for haste; consequently one can spend some time trying with hot packs to stop the ordinary bleeding. If these are not successful, there are the Hagner bag and the Davis bag, both effectual in their places. Serious hemorrhage calls for thorough packing with gauze. This, in suprapubic cases, should not be removed for four or five days; but in perineal cases there is danger of pressure necrosis of the rectum if the gauze remains longer than forty-eight hours. Lower's technic of suturing the margin of the capsule over an indwelling catheter is not well tried as yet: but he may soon have some definite results to report. Hunt's method of whip stitching the margin of the capsule takes time, and often must be reinforced with gauze packs.

Anesthesia

Many of these old patients are poor subjects for general anesthesia, and for them the perfection of regional anesthesia and nerve block has been a godsend. For the past year, the writer has used regional anesthesia (abdominal infiltration) with procain, 0.5 per cent, followed by infiltration of the prostatic capsule, and in only 2 out of 20 suprapubic prostatectomies was it necessary to resort to gas-ether.

It is indeed marvelous to see these old men leave the operating room with no shock or pain, and have really no appearance of having undergone one of the most serious operations in major surgery. Still one cannot say that a well-administered general anesthetic greatly increases the danger. A. B. Cecil reports only 4 deaths in 250 prostatectomies (only 34 suprapubic), and all were done under general anesthesia.

Results

If we are asked to compare the results of perineal as against suprapubic prostatectomy, we are going to step into a very embarrassing dilemma. We have already stated that the mortality rate is decidedly less following the perineal operation; but this is based upon the published statistics of some of the few men doing the perineal operation as against the statistics of the general run of surgeons doing the suprapubic operation. Here an important fact is likely to be overlooked; that is, the low mortality of perineal prostatectomy is obtained by men especially skilled in the management of urologic conditions, and to which they limit their work. If we compare their mortality figures with equally skilled urologists who do the suprapubic operation, we will find, on the whole, that the mortality is about the same, averaging between three and four per cent.

Cecil, whose mortality of only 4 in 250 cases stands as an exceptional record, and who is a firm adherent of the perineal method, says, "As the technic of prostatectomy was developed it was found that a régime of preliminary treatment was of equal, if not more importance." This statement strikes the real keynote to success; but the writer would like to add to this, *the importance of careful and discrete postoperative care.*

An accurate idea of the comparative functional results of the two operations cannot well be obtained from statistics. The experience of those who have done both operations favors the suprapubic route. Those who do nothing but the perineal operation are most sincere in their conviction that their functional results are satisfactory.

Of 115 of the writer's patients, only 17 prostatectomies were done per perineum, two of these being for carcinoma. One of these two

had a fine functional result lasting till he died from metastases more than a year later; the second had a poor result. Of the others the functional results were excellent. There was one death caused by pneumonia contracted two weeks after operation, and at the time the patient was almost ready to go home. Of the suprapubic cases, there were six deaths; two were due to pneumonia; one was due to pulmonary embolus on the tenth day; two were due to sepsis; and one was due to hemorrhage. The latter death was of a man, aged 88 years, and was occasioned by his own personal nurse releasing the air from a Hagner bag soon after operation. When we discovered the error, he was too far gone to be revived. One of the two deaths from pneumonia was in a man aged 90 years. The operation was easy, with gas-ether. Section of the prostate showed an abscess in one lobe. Death was due to bronchopneumonia, 5 days after the operation. Young related a similar case, also fatal, and expressed the opinion that such cases, with abscess, were extremely dangerous.

Conclusions

1. The choice of operation should be left to the surgeon, and be based upon his experience and training. If he is not familiar with either operation he should not touch the patient.

2. Results, so far as mortality is concerned, depend upon most thorough preoperative care; skillful, rather than rapid, operative technic; and avoidance of meddlesome postoperative fussing with the wound.

3. The use of local anesthesia and a better understanding of the control of hemorrhage and infection will greatly reduce the mortality in suprapubic prostatectomies.

4. Functional results are, on the whole, just as good in one operation as in the other.

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PROSTATISM—PALLIATIVE OR OPERATIVE TREATMENT?*

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The symptom complex and accompanying prostatic pathology included in the term prostatism may vary greatly both in subjective bladder dysfunction and in the degree and type of morbid change in the prostate gland itself. Successful treatment of prostatism must involve a careful study not only of the obstructive uropathy but also of its effect upon the individual's renal and bladder function in order to restore as completely as possible adequate bladder drainage by practically normal urination. Any decision as to palliative or operative procedures can be made only after a consideration of all the factors involved in this condition and by selection of the means that offers the best possibility of relief in each individual case.

The prostatic *hypertrophy* or *hyperplasia* may involve either the lateral lobes of the gland or the posterior commissural tissue that joins these lobes in an extension across the floor of the bladder outlet. The anterior lobe is small, rarely becoming involved and then only as a part of a generalized hypertrophy, while the posterior lobe plays no part in this process. Vesical obstructions may arise from hypertrophy in either of the lateral lobes, or the posterior commissure, either singly or combined. To some extent, there exists confusion of terms regarding posterior commissural changes. These have been described as middle lobes, or vesical neck contractures, depending on their gross appearance. Randall prefers the term median bars and divides them into the glandular or fibrous types depending upon the predominating tissue of which they are composed. As they are derived from true prostatic tissue, mixed types are common but the distinction may be made depending upon whether or not the obstructing tissue change is an adenomatous or a chronic inflammatory process.

The subcervical glands, or glands of Albarran, may undergo hypertrophy, resulting in a third type of obstruction of the vesical outlet from intrusion through the sphincter. This type of change begins as a small spheroid of tissue growing directly beneath the mucous membrane. This mass in time pushes upward into the bladder in which it may attain a size as large as any prostatic lobe and effectively close the outlet by a ball-valve obstruction.

To recapitulate, there are three distinct types of prostatic obstruction caused by entirely different obstructive changes and all capable of causing the clinical picture of prostatism. These are: (1) generalized prostatic hypertrophy; (2) median bars, either glandular or fibrous; (3) hypertrophy of the subcervical (Albarran's) glands.

Urinary obstruction from prostatic pathology always develops slowly and, as the early symptoms are of no concern to the patient, the condition may be advanced before the individual presents himself for relief. Nocturia and diffi-

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culty in starting the urinary stream may be termed the prodromal indications of prostatism Recurrent attacks of dysuria and frequency usually ensue but the sudsidence of these on little or no treatment affords the patient a false sense of the triviality of the complaint. After a varying course, however, extending over a period of several years, the vesical symptoms increase in severity with the progress of the morbid prostatic condition. Acute retention ensues in a certain group of cases, and may follow exposure to cold, physical exertion, alcoholism, confinement to bed by accident or incidental illness, or even the voluntary suppression of the desire to urinate.

Prostatic bars and commissural hypertrophy usually cause a predominance of the vesical symptoms including, dysuria, frequency, and nocturia. This results from the interference that this type of morbid change produces upon the trigonal muscle that opens the vesical sphincter during voluntary urination. The hypertrophing tissue, together with any chronic inflammatory process that may accompany it, pushes up, so stretching the trigonal muscle that an opening of the vesical neck is impossible for complete emptying of the bladder. This results in frequent attempts that only empty the bladder partially and the ensuing infection that frequently is present in the residual urine completes the clinical picture of cystitis. Acute retention may occur if the bar is of considerable size or an acute congestion blocks the vesical sphincter.

Lateral lobe hypertrophy is the most frequent cause of a weak urinary stream, dribbling at the supposed completion of the act, and acute urinary retention. Here the mass of morbid tissue is larger and usually intrudes through the vesical sphincter. The accompanying posterior commissural changes render the act of urination most difficult. Residual urine may collect rapidly and slight congestive reactions completely block the vesical outlet.

Solitary lobe or hypertrophy of Albarran's glands acts as an effective ball valve in blocking the bladder neck. The obstructive effect is considerably increased if other prostatic enlargements accompany this type of pathology.

Prostatic obstruction is accompanied by an increased intravesical pressure due to two factors; the first is the laboring bladder muscle contracting in an effort to empty the viscus; the second is the accumulation of residual urine. This increased pressure is soon transmitted through the ureters to the kidneys so that the secretion of urine must be carried on against an increasing hydrostatic obstruction. Once the kidneys adapt themselves to this, any lowering of the pressure must be done gradually to prevent a prerenal anuria from sudden withdrawal of the pressure to which these organs are accustomed.

Palliative treatment of prostatism is indicated in two groups of cases. The first comprises instances in which the underlying pathology and symptoms are slight and the second group includes individuals who refuse operation or those for whom surgery might be attended with greater risk than is justifiable. It must be realized that there is always a large number of cases that might fall into either group but in these it is more advisable to employ conservative measures first until it is deemed safe to proceed more radically. There is no direct relationship between the degree of prostatic change and the amount of residual urine or subjective symptoms. Complete study of each individual patient is necessary before concluding upon the procedure that best should relieve the condition.

In prostatism of moderate degree the patients are usually in good physical condition but are uncomfortable, as the result of their urinary dysfunction. The outstanding symptom is frequency, generally more pronounced at night, and accompanied by burning of varying degree. Necessity of many repeated urinations interferes with the daily economic or social life and rest at night is disturbed.

The voided urine of these individuals may contain some pus but in many instances a urinalysis shows remarkably normal findings. In the absence of a true cystitis, an abnormal condition of the vesical sphincter and trigonal muscle should be suspected.

The amount of residual urine is a good index of the ability of the bladder to empty and should be estimated early in the study of any case. Moderate retention is to be expected but there is no direct ratio between this and the intensity of the symptoms or the extent of the prostatic enlargement. Per rectum the prostate gland is enlarged but slightly, if at all, and cystoscopy is essential to determine the exact extent of the condition.

This examination may be safely made in all patients in whom the residual urine is not over six ounces and the bladder is not badly infected.

The treatment will depend largely upon the type of prostatic change found. Median bars are generally accompanied by some degree of chronic prostatitis. Prostatic massage and intravesical irrigations of mild antiseptic solutions frequently reduce the inflammatory tissue to a point at which it will not interfere with bladder

function. Dilatation of the vesical outlet with large sounds or Kollman's dilator may be employed to stretch the vesical sphincter, thus reducing the fibrosis and cellular infiltration. This procedure is necessarily slow but should be persisted in at regular intervals provided an improvement in the subjective symptoms or diminution in residual urine occurs.

Early adenomatous change does not yield to these therapeutic measures as well as bar formations. Glandular hyperplasia cannot be stopped, but a lessening of any inflammatory or congestive process will minimize the obstruction and in some instances seems to inhibit the hypertrophy for a time at least.

Sometimes acute retention may occur in relatively mild cases of prostatism, from one of the predisposing factors mentioned previously. Obviously catheterization is the treatment of choice and unless the bladder is distended considerably it may be drained entirely. This one procedure may be sufficient to restore bladder tone and the patient may continue to void naturally. In other instances, repeated catheterization may be necessary and here the interval between instrumentations should be sufficiently short to prevent too great an accumulation in an impotent bladder. Palliative measures are indicated or imperative in another group of cases that present an entirely different clinical picture from that discussed previously. This group includes *aged or debilitated individuals with advanced prostatic disease.*

Here the bladder usually is chronically distended and attempts at urination result in the frequent emptying of but small amounts at one time. In complete atony of the bladder there may be an incontinence due to overflow. The vesical situation is but one of the clinical problems to be considered. Myocarditis frequently accompanies prostatic hypertrophy and chronic nephritis is caused by renal back pressure. The cardiac musculature is laboring to support an adequate blood pressure for renal secretion and any sudden alteration in this delicate balance will result in collapse and uremia.

Any measure directed at the relief of the urinary obstruction should be accomplished in such a manner as to disturb the intravesical pressure as slightly as possible. The sudden withdrawal of large amounts of urine is to be avoided owing to the dangers of uremia and hemorrhage.

It has been shown that a removal of 90 c.c. of urine causes a decrease of 50 per cent in intravesical pressure and even removing 30 c.c. results in a fall of 25 per cent. Relief of subjective symptoms is accomplished upon the catheterization and is noted upon the first few drops of urine released from the bladder. Various types of apparatus have been devised for the purpose of gradual decompression. A simple one consists in attaching a rubber tube to the catheter and elevating this tube above the level of the bladder so that no urine escapes. A glass Y-tube inserted into the conveying tube with the stem of the Y directed upward affords visibility and prevents siphonage. This Y-tube is gradually lowered until the urine first begins to drop over, and then is fixed at this level. Further lowering of the tube is done at intervals depending upon the stability of the patient's blood pressure. In some instances this may require from twenty-four to ninety-six hours before the bladder may be decompressed completely.

A recognition of the *dangers of ill-advised cystotomy,* a procedure accompanied by a high immediate mortality, has decreased the frequency of this operation for acute retention.

It may be necessary, however, in some few cases as an emergency procedure. The indications are the failure in attempts at urethral instrumentation or excessive intravesical hemorrhage with clots that may have resulted from a previous catheterization.

Here the cystotomy should be performed under local or low spinal anesthesia and care taken to spill as little of the bladder contents as possible. This may be done by the insertion of a mushroom-tipped catheter introduced through a small incision in the bladder wall. This catheter may then be connected to a longer tube and decompression accomplished against hydrostatic pressure.

The prognosis of patients with advanced prostatism *treated palliatively* should be guarded. Individuals have lived many years with inlying catheters but constant care is essential in order to insure adequate drainage and prevent an ascending infection to the kidneys, which would terminate life. The danger of an epididymitis is always present. Permanent suprapubic drainage is likewise unsatisfactory. The catheter should be changed frequently and it is difficult to keep such patients comfortable.

Surgery, or the operative treatment of prostatism, while subjecting the patient to a greater initial risk, offers relief by removal of the obstructive or hypertrophied tissue, instead of trying to circumvent it by mechanical means. Numerous factors, however, must be considered before determining upon this method.

In addition to the age alone of the patient the changes that the prostatic pathology has produced must be determined.

Surgical treatment today has reached its minimum mortality because of a proper understanding and recognition of the factors that minimize

risk. The *preoperative preparation* and care of the patient is now the all important task and more essential than mere operative technic.

Adequate bladder drainage by means of the inlying catheter is necessary in restoring kidney function to a safe level. Estimations of the blood urea, nitrogen, and creatinin content indicate whether or not the kidneys are eliminating these waste products of protein metabolism. An increase above normal is to be expected in prostatism. The dye tests are employed as proof of kidney capability. The renal margin of safety is in direct proportion to the variation from normal of these functional coefficients.

Postoperatively the greatest load will be placed on the cardiovascular system and this should be of sufficient tonicity to withstand the shock. It is of vital importance that the cardiac muscle be capable of maintaining an effective blood pressure for renal secretion.

The *choice of operative procedure* will vary with the pathologic type of prostatism present. Details of surgical technic will not be reviewed here but the various operations will be mentioned only with their indications.

Prostatic bars present the most simple surgical problem. These obstructions are dealt with by a number of transurethral operations performed through specially devised instruments. The obstructing tissue *may be punched out* with a circular blade or cautery electrode. Another method is the *cutting away* of the bar by a *high-frequency electrode* under direct vision through an operating cystoscope. Sacral or low spinal injections suffice for anesthesia and the operation is accompanied by a minimum amount of shock. Convalescence is usually short and uncomplicated. The end results are satisfactory and permanent unless a lateral lobe hypertrophy develops which causes a return of the obstructive symptoms.

Generalized prostatic hypertrophy requires a complete enucleation of the adenomatous tissue and the operation of prostatectomy should be performed in all patients who are suitable surgical risks. The older argument of perineal versus suprapubic operation has now been abandoned with the recognition that the choice of procedure depends upon the method that offers the best approach to the obstructing tissue.

Perineal prostatectomy is indicated in intraurethral hypertrophy of the lateral lobes with small commissural change. This operation in skilled hands gives excellent results and is attended by a low mortality and morbidity. The enucleation is an entirely extravesical procedure which is followed by a brief period of perineal drainage and a return of normal urination usually within a week. The unfortunate sequelæ include incontinence and vesicorectal fistulæ.

Suprapubic prostatectomy is indicated if the lateral prostatic lobes have intruded upward through the vesical sphincter or if considerable commissural hypertrophy is present. It should be done also in those cases complicated by diverticula, calculus formation; or if it is advisable to explore the bladder under direct vision owing to inadequate cystoscopic examination.

A period of preliminary bladder drainage is essential and the question arises here whether a *first stage cystotomy* is advisable to insure this. This is *unnecessary* in those individuals who tolerate an inlying catheter and whose general condition and renal function improve by this simple drainage.

Hunt, in reviewing one thousand consecutive prostatectomies at the Mayo Clinic, states that preliminary cystotomy was performed in but 18 per cent of the cases.

In certain instances, however, preliminary *cystotomy may be indicated*. These include cases in which an inlying catheter cannot be tolerated or if no improvement is accomplished by this means. If cystotomy is done, there should be a considerable period before the secondary prostatectomy, or in unfavorable cases the suprapubic drainage may have to be more or less permanent until the patient's general condition improves and adequate renal function is restored.

Prostatectomy should be considered always as an operation of election and should not be performed until the general condition of the patient and the laboratory findings indicate that the individual is a good surgical risk.

In summarizing it may be said that palliative treatment is indicated in prostatism of a moderate grade in which the underlying pathology is slight. Cases of advanced grade accompanied by general debility should be treated also by conservative measures.

If palliative treatment restores renal function and the general condition improves, then surgery should be considered. Bladder drainage by mechanical means to overcome prostatism does not offer a good prognosis over a long period of time.

Operative treatment is indicated in those patients that are operable and whose cardiovascular and renal excretory systems will withstand the operative shock and whose reserve is sufficient to carry them through the average period of convalescence.

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PROBLEMS IN THE TREATMENT OF PROSTATIC OBSTRUCTION

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Until the exact cause of prostatic hypertrophy in men past middle age is known, no prophylactic treatment can be instituted. We must, therefore, deal with the problems of obstruction as they are produced by pathologic conditions of the prostate gland. In the majority of patients the lateral lobes hypertrophy and project intravesically, at the same time so raising the neck of the bladder that the patient is unable to empty the bladder completely. In a goodly percentage of cases, however, the obstruction is caused by an overgrowth of the so-called middle lobe. In this group, the middle lobe acts very much as a ball valve, when the bladder is filled and attempts are made to empty it, the lobe is forced against or into the urethral opening and produces partial or complete obstruction.

In another group of patients, there is present the so-called collar hypertrophy of the prostate. The prostate seems to enlarge almost equally around the entire urethral opening; there is an elevation of the neck of the bladder and saeculation behind it so that the patient is unable to force out all the urine at the time of voiding, the result being that a certain amount of residual urine is always in the bladder.

The writer believes that the incidence of malignant tumors of the prostate gland is much greater than is generally supposed. The symptoms may not be obstructive and the patient is often able to empty the bladder almost completely, although sometimes with considerable difficulty. An early symptom of malignancy, the presence of which in men past middle life should always be regarded with suspicion, is sciatica. In a case of persistent sciatica, there is always a possibility of the presence of a malignant tumor of the prostate with metastasis. Too often failure to recognize this possibility means that a patient is treated for sciatica, the real cause of which is entirely overlooked because of failure to make a rectal examination. It follows that by the time most of these patients are seen, there is no longer any hope of curing them by means of a radical operation. Occasionally the palpation of a hard, more or less irregular and fixed prostate, which is the seat of a chronic inflammatory process, will suggest the presence of a malignant tumor.

One of the great dangers in cases of prostatic obstruction is the traumatism which may result from the attempt to relieve the first retention. The patient may be at a place far from the hospital or from the possibility of care by a specialist, so that proper equipment is not available for the relief of the overdistended bladder. An acute retention calls for a real surgical procedure and every precaution to avoid traumatism and sepsis should be exercised. The importance of this is too often overlooked and the patient is often so badly infected or traumatized that the case goes on to a fatal termination.

A sterile soft catheter should first be tried, after the meatus and the surgeon's hands have been properly cleansed. If the soft catheter cannot be introduced, a Coudé tipped catheter—the so-called Wishard catheter—should be tried. If this fails, a filiform bougie and follower may be introduced. Rather than persist in unsuccessful attempts at passing a catheter or resorting to the metal catheter, the writer prefers to make a suprapubic puncture with a trocar and cannula, and insert a catheter from above. The instrument used has proved very helpful, without producing any damage. It has also served as a suprapubic drain, thus obviating the necessity of performing a suprapubic cystotomy as the first part of a two-stage operation.

Although the best treatment for the complete relief of obstruction produced by hypertrophy of the lateral lobes appears to be a prostatectomy, perhaps we have neglected other methods which might give relief without so radical a procedure. For example, it is well known that cases of prostatitis are not followed by hypertrophy. Every urologist knows that a patient who has had a very pronounced prostatitis will not have hypertrophy of the prostate. The inflammatory condition produces such contraction and scarring that the gland never increases in size. If that can be done by an infectious inflammation, some such effect might be produced by a chemical reaction or inflammation. For this reason, in our research laboratory, Dr. R. L. Johnston has recently been carrying on a series of experiments in which he has injected various chemicals into the prostate gland of the rat and has noted a resultant marked reduction in the size of the gland. As yet there has not been a sufficiently extensive clinical application made of this finding for a report, although in several instances the writer injected chemicals into the gland at the time of the suprapubic cystotomy; in some cases the patient was too ill for a radical operative procedure to be performed, but insufficient time has elapsed for a report of the results. The cases in which this procedure is being tried are those in which the blood urea remains continuously high and the patients are able to carry on only by the constant use of a retention catheter or by repeated catheterizations. It is well known

that disuse will result in atrophy. Thus in castrated animals the prostate always atrophies, and at one time castration was an accepted procedure for the treatment of prostatic hypertrophy. The writer is not sure but that in certain instances even the division of the vas would result in a definite reduction in the size of the gland.

In the case of hypertrophy of the middle lobe, it is generally believed that the entire gland should be removed, but for some time the writer has removed only the middle lobe and has been agreeably surprised to find that the patients have been able to empty the bladder very completely without much difficulty. Whether the lateral lobes will later hypertrophy remains to be seen, but the removal of the projecting middle lobe which often has a very small attachment hardly more than a small pedicle, is a much less radical surgical procedure than the removal of the entire gland. Moreover, many of these patients are old and handicapped, so that if the minor operation will suffice, the patient should always be given the benefit of the procedure which produces the least reaction. In many cases the hematuria which may accompany prostatic hypertrophy is due to ulceration of the middle lobe which has been traumatized by catheterization.

In the case of collar hypertrophy, the punch operation will often be all that is required to give the patient relief, but this procedure has not been found to result in sufficient benefit in cases of bilateral hypertrophy.

Sometimes a fibrous prostate contracts around the urethra and produces obstruction. In such cases the punch operation gives sufficient relief.

As already stated, the patient with a malignant prostate usually comes so late that a radical surgical procedure is no longer feasible or possible. For these the treatment generally employed is either the implantation of radium or x-ray therapy, or both. In many of our patients, surprisingly great relief has been secured by x-ray treatment alone. Very few patients can be considered to be cured; but some of these patients have lived comfortably for several years and been able to empty the bladder with comparative ease. The development of a malignant tumor of the prostate is a slow process, and even without any treatment a patient may live in comparative comfort for a number of years.

The dangers that formerly attended prostatectomy were shock and hemorrhage. Shock can now be almost entirely prevented by the use of sacral or spinal anesthesia, and hemorrhage can be controlled by the employment of a proper surgical procedure. The blood of every patient who is being prepared for operation should be grouped and a donor secured before the operation is performed. In this way the surgeon can anticipate any condition that may arise and is prepared to give an immediate blood transfusion —a safer procedure than to waste time grouping the blood and securing the donor after alarming symptoms have developed.

Infection does sometimes occur, not so much a local as a generalized infection. The writer has seen several patients in whom colon bacillus septicemia followed prostatectomy in comparatively clean cases.

Once these factors—hemorrhage and shock—are controlled, the two greatest dangers which may occur are cardiac and pulmonary complications, neither of which can always be anticipated. Occasionally, although apparently the patient seems to be progressing well, some cardiac complication has suddenly developed, with resultant sudden death. Pneumonia may develop even if spinal anesthesia has been employed, and pneumonia in the aged is always a serious complication.

The preoperative preparation for prostatectomy has been considered by others in this symposium, but the writer wishes to emphasize the importance of the postoperative care for these patients. For at least the first twenty-four or forty-eight hours, every patient should be cared for by nurses who have been specially trained to care for this type of case. The intern and the nurse, as well as the surgeon himself, should be ready to meet the complications that may arise after a prostatectomy and should be able to cope with them promptly.

SUMMARY

1. The cause of prostatic obstruction should be searched for by further studies directed especially to the discovery of prophylactic methods.

2. Each case should be studied to determine the type of obstruction present, whether it is due to hypertrophy of the middle lobe or of the lateral lobes, or to collar hypertrophy, and treatment should be instituted according to the findings.

3. A further study should be made to determine whether patients who are too seriously ill for radical operation can be treated by the injection of certain chemicals into the gland, thus producing sufficient atrophy to relieve the symptoms.

4. The presence of malignancy should be determined by more frequent examinations of the rectum and prostate in so-called cases of sciatica.

5. Treatment with the x-ray or with radium, or with both, thus far seems to be the best treatment for malignant tumors of the prostate.

6. Hemorrhage should be controlled at the

time of operation. The patient should not be returned to bed in the hope that the bleeding will stop as soon as the patient is out of sight.

7. Nurses and interns, and the surgeon himself, should be prepared to deal promptly with postoperative complications.

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PROSPECTS OF THE PROSTATIC*

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The natural history of prostatism, i. e., the prospects of the prostatic who is not treated at all, follows no set rule. Symptoms begin when the passage of urine through the urethra is obstructed by the prostatic enlargement.

The frequency of microscopic change in the prostates of individuals over sixty is very great. Sir Henry Thompson and Gardner and Simpson agree that at least one-third of all males reaching the age of sixty show lesions of prostatic enlargement yet no more than about one-half of these will ever suffer any noteworthy symptoms therefrom.

The prospect of half of the prostatics, therefore, is that they will have no symptoms. For the other half it may be said that their symptoms will result chiefly from obstruction to the passage of urine through the urethra, and this obstruction is a compound of weakness of the bladder muscle on the one hand and the obstructing plug in the urethra on the other. The age at which retention occurs and the amount of urine retained in the bladder will depend upon the expulsive as well as the obstructive forces.

One meets, for example, conditions of sclerotic prostatitis in the young which results in a rigidity of the bladder neck that obstructs urination quite as enlargement of the prostate does in the aged. You will be surprised at the tenacity with which the resilient bladder muscle continues to fight its losing fight against an obstructing prostatic sclerosis in a youngster fifteen or twenty years of age. The act of micturition may be an incessantly repeated torture to him and yet you may find that, after five or ten years of this torture, the fundus has not sagged and the bladder, though trabeculated, continues to empty itself.

With these patients contrast those aged true prostatics whose symptoms have only just begun. Yet they are in a state of complete retention.

Now if prostatism causes retention of urine and retention causes symptoms, for three-fourths of the patients, those symptoms will appear between the ages of fifty and seventy. Many prostatics who suffer the symptoms of retention for the first time after seventy have either carcinoma of the prostate or sclerosis. Carcinoma, which is so common among the older patients, afflicts one in five of the prostatics under seventy. Although the lesions of prostatic enlargement are such as might well predispose to carcinoma of the prostate, and although the pathologist finds cellular agglomerations of a carcinomatous type in the midst of pseudo-adenoma, nevertheless prostatic carcinoma, as clinically noted, has no manifest relation to prostatism.

The first symptoms of prostatism are a nocturnal frequency of urination (which may be associated with discomfort radiating or referred from the prostate), essentially a nocturnal polyuria similar to that of chronic nephritis. Later the retention increases and hence urination becomes more frequent. The writer has tabulated histories of more than two hundred patients.† About half were found to have suffered acute complete retention at some time or another in their disease and one in four had acute retention at the onset. (At least it was this symptom that brought the patient to a physician.) Among 120 patients whose acute retention occurred at the onset of the disease, 27 regained the power to empty the bladder to within an ounce or so, 57 went into incomplete retention, and 36 into chronic complete retention. Four patients went ten years substantially symptomless between attacks of acute complete retention, and one of them died of cardiac insufficiency eleven years after a single catheterization and to the end had no further symptoms from his prostate.

This is not to say that acute retention does not require intelligent treatment. Of all the elements in the prognosis of an attack of acute retention, prompt intelligent treatment is of course of the first importance and next in importance is the patient's age. Thus of the patients who resumed satisfactory urination after an attack of acute complete retention, one-half were under 57 years, while of those that went into incomplete retention, one-half were over 60 (the eldest 73), and of those that went immediately into chronic complete retention, one-half were over 70.

The expectation of life for all patients from the first symptom to chronic complete retention was 6 years for patients under 50; 4 years for those under 60; and 2 years for those whose first symptom occurred after 60. The prognosis

* These remarks refer to prostatic enlargement, omitting sclerosis which is an entirely different process.

† From my father's records, the cases all antedating the year 1900.

of the disease, after retention has become finally and permanently complete, depends upon so many fortuitous circumstances that it cannot be expressed statistically. Any one of us can recall the rugged old fellow who for 10 years carried his catheter in his pocket, used it as he pleased and spat upon it in sheer derision of our cherished asepsis. He was rare; none of us have met, among hundreds of prostatics, more than a few of his type.

One of the standard remedies employed by all urologists and by most physicians for the treatment of diseases of the urinary organs is the free administration of water. Diuresis of this sort is required for the relief of the renal retention that results from prostatism, but before the patient is forced to drink water, provision should be made that the water can get out. If there is partial retention of urine, forcing fluids may make this complete. It would seem scarcely necessary to call this to your attention did one not see a number of patients who have suffered disastrously from neglect of this simple precaution.

Although occasionally a prostatic can continue to live the so-called catheter life for many years, with relative impunity, he is always in a state of unstable equilibrium and his success with the catheter will depend upon many items, notably upon his own intelligence, cleanliness, and gentleness. You may be surprised to hear me dwell upon this subject at this day when all of us endeavor to persuade the prostatic to permit prostatectomy at the earliest appropriate moment. There is a class of patients which we still condemn to catheter life. These are the tabetics with paralyzed bladders. They do extremely well. They may expect to catheterize themselves for many years without important infection. The reason for this is that the catheter gently and intelligently used empties the bladder almost as the act of micturition does. The only differences are the trauma and infectiousness of passing the instrument and the cutting off of the urinary stream that would normally irrigate the urethra and keep it clean. The tabetic can very readily weather a prolonged catheter life precisely because the internal urethral orifice is open and the passage of the instrument does not traumatize the prostate. For this very same reason the prostatic stands catheter life badly. The sclerotic prostate also stands the catheter distinctly better than does the adenomatoid prostate.

When one comes to discuss the prospects of the prostatic after operation, all is confusion. There are four general types of attack upon the enlarged prostate itself. There is the nonoperative attack whether by radiation or by the administration of internal secretions. There is the attack through the urethra by various punches and cauteries. There is both a perineal and a suprapubic prostatectomy.

The internal secretions are advocated more often by physicians in other countries than in this country. The attack by the so-called deep x-ray or by the radium pack is being experimented with very widely in this country. It does not appear that the experiment is a profitable one excepting for patients with large prostates, small retention, relatively mild symptoms, and a desperately bad general condition of the heart or other vital organs. Patients who cannot face operation may be submitted to radiation treatment. A few of them will be temporarily benefited.

Any operable patient, however, should be operated upon because his very operability is an assurance of a length of life that will bring him an increase of retention and operation at some later date when he is less able to bear them. This is illustrated by the history so often overlooked of what might be called the homeopathic surgical attack upon the prostate through the urethra.

The supporters of the various intra-urethral operations today do not seem to bear in mind the purely temporary character of the relief of retention afforded in the past by similar operations. The Bottini operation, for example, burned a deep groove in the prostatic bar and relieved many patients of their retention. Yet the ultimate report of Freudenberg showed that most of these cases relapsed. Chetwood, impressed by the inaccuracy of the blind Bottini attack and yet daunted by the dangers of prostatectomy, proposed and performed a Bottini operation through a perineal incision so that the prostatic obstacle could be appreciated beforehand by palpation, then burned, and the resulting destruction verified by a second palpation at the close of the operation. His immediate results were good but his ultimate results were entirely unsatisfactory. The writer collated the histories of seventy-five patients subjected to this operation. Ten years later only two of them had been permanently relieved. The others were dead, in retention again, or had submitted to prostatectomies. It seems inappropriate to go more deeply at this moment into the question of prostatic sclerosis and the adenomatoid bar and others forms of minor obstructions such as are nowadays relieved by the operation of Young and Caulk and Collings. Previous experience would lead us to expect that many of these will

turn out to be carcinomata while others will recur in the form of the ordinary hyperplasia and many a surgeon will be astonished in the future to discover a fully developed general hyperplasia of the prostate, which on operation will deliver two lateral lobes larger than peach stones within a year, more or less, of the time that the prostate had seemed scarcely enlarged at all. Dr. Caulk has expressed the opinion that his operation repeated several times opens up the adenomatoid masses and permits a certain drainage and shrinking of them. The impression of others, from a much more limited series of cases and without any direct attack upon the lateral lobes, has been quite the opposite.

In the future, therefore, as in the past, we shall have to depend upon a real prostatectomy for the permanent relief of our patients. The prognosis of suprapubic as compared with perineal prostatectomy was long ago crystallized in the aphorism that after suprapubic prostatectomy more patients are dead but after perineal prostatectomy more patients wish they were dead. The technic of perineal prostatectomy has been perfected to such an extent that Hinman, for example, was able to give a clinic last summer at which several of his students performed the operation creditably and presumably obtained satisfactory results; but there are not enough experts to go around. We should face the prospect that for many years to come a large proportion of prostatectomies will be performed by surgeons relatively poorly qualified. Perineal prostatectomy performed by such men implies a certain number of relaxed sphincters and torn rectums. The qualified urologist should be able to do a perineal prostatectomy though this operation is, generally speaking, a brilliant and complex way of doing a relatively simple thing.

But since suprapubic prostatectomy has a greater postoperative mortality, though a less postoperative morbidity than perineal prostatectomy, let us consider the three great dangers of suprapubic prostatectomy: renal insufficiency, infection, and hemorrhage.

There are other causes of death common to pelvic operations (such as phlebitis and embolism), or common to aged patients (such as pneumonia, cardiac decompensation, apoplexy, etc.), but the toll of these more or less balances, whether the prostatectomy is done above or below the urethra. These three preventable dangers should be manageable even by the relatively inexpert and, if managed, should reduce the mortality of suprapubic prostatectomy far below that of perineal prostatectomy.

Renal insufficiency is, as you know, a danger to be taken care of, in large measure before operation, by decompression of the bladder continued long enough to establish a balance of renal function. This is not a plea for high decompression. The oldest of old-fashioned decompressions whereby one emptied the overdistended bladder only partially and did not pay any attention, as is done nowadays, to the first pint or so that drained from the distended viscus, did very well and if it failed, this was not for lack of high decompression but later because low decompression was not kept up long enough. In brief, it is good practice when a patient comes with prostatic retention of urine to put him in bed and to decompress by means of a Y-tube fixed to the head or the foot of the bed at the level of the abdomen. The same level is maintained until the prostate is removed.

There are two exceptions. The chronically overdistended bladder, of which the neglected tabetic is the type, may need decompression for a week or so which will be somewhat higher than the abdomen but never more than a foot above the bladder neck. The other exception is the patient who cannot or will not bear the catheter in his urethra. Apart from these two exceptions the Y-tube is always kept at the same level, establishing a watershed at approximately the height of the patient's abdomen as he lies on his back. If he has been long in retention and his kidney function is greatly reduced, the cardiac function will also require attention and, as is well known, the best way to stimulate the prostatic's heart is not to give him digitalis but to get him out of bed, first in a chair, and subsequently to walk him about, and the best rule is not to operate upon him until he can walk at least a hundred yards without getting exhausted. While this cardiac treatment is going on, decompression can be continued by hitching the Y-tube to the patient's belt. Whether the patient is in bed or up, the old-fashioned siphon need never be employed.

The object of decompression is to stabilize the renal function, not to bring it back to normal. The patient is ready for prostatectomy as far as his kidneys are concerned when the blood chemistry has been reduced as far as it will go and the heart is ready when the patient can walk one hundred yards. If you do not believe this, go over the history of patients who have had a two-stage prostatectomy with several months' interval between the first and second stage. Their phenolsulphonephthalein output may at all times be approximately zero. Their nitrogen retention may show a creatinin content constantly above two mg. and even a nonprotein nitro-

gen approximating one hundred mg. The fact that they are operated upon after several months attests their vitality and their cardiac adequacy. So far as my own experience goes, they seem at first the most desperate risks, yet they all recover from their prostatectomy.

It has just been suggested why they recover. They have had an operation which immunizes the pelvic cellular tissue to infection.

Let us then consider the second grave preventable danger of suprapubic prostatectomy, viz., infection. It is possible for infection to arise, following prostatectomy, from many sources. We may concern ourselves with three: the suprapubic wound, the prostatic wound, and the kidney.

Renal infection following a prostatectomy for which preparation has been properly made is perhaps not unusual but grave renal infection is unusual. Yet acute pyonephrosis caused by ureteral retention and occurring several months or years after an entirely successful prostatectomy is by no means unheard of. The writer has removed three pyonephrotic kidneys some years after prostatectomy, without losing the patients. Once through hesitating too long, a patient died without operation. Postmortem examination showed no reason why the kidney should not have been removed. The pyonephrosis was only partial and due to retention in a single calyx. Such cases are exceptions. Many years ago we used to think of renal infection as a cause of many of the deaths following prostatectomy. Routine preparation has eliminated many of these. The patients who die of infection following prostatectomy seem to derive their infection from the wound, thus one sees retrovesical or lateral pelvic abscesses result from the prostatectomy. This is to be guarded against by gentleness in operation—by not tearing through the so-called prostatic capsule.

Pelvic cellulitis and general septicemia are common complications of suprapubic cystotomy. If the inflammatory complications following prostatectomy are compared with those that follow the so-called preliminary suprapubic drainage, you will find them much alike. Because they interfere with the kidney function they are often thought of as renal infections but to my mind the usual source of infection, whether from suprapubic cystotomy alone or from prostatectomy properly prepared for, is infection of the prevesical space. The evidence is largely negative. If you eliminate the prevesical infection, you eliminate the postoperative infection, you annihilate the ten per cent mortality of suprapubic drainage, you ameliorate and shorten the convalescence from each of the two operations.

Since Dr. Neff called my attention to prevesical section, I have preached it enthusiastically, notably at the last meeting of the American Urological Association. Suffice it to say here that it consists in opening the wall of the abdomen down to, but not through, the bladder muscle, performing an operation as for preliminary suprapubic cystotomy and then not doing the cystotomy. A gauze pack is left in this wound and after the granulations have been established for a few days (preferably three or four), the bladder is opened and the prostate removed. It may be necessary, but exceptional, to make the operation a three-stage one. First a prevesical section, then a few days later when the pelvic cellular tissue has become immunized, a suprapubic drainage and finally, at one's leisure, a prostatectomy. This method of operating is extraordinarily felicitous.

The day the patient enters the hospital tie off both vasa, tie a catheter into his urethra, and do a prevesical section. About three out of four of the patients are ready for prostatectomy four days later. It is expected that during those four days the patient will be comfortable and free from any rise of temperature above 100° F.

It should be noted, parenthetically, that if a three-stage operation is done, i. e., if the bladder is punctured for further drainage before the prostate is to be removed, this puncture, though it may be done in bed, should be performed on a distended bladder and with a scalpel. One of my friends complained to me that in doing this operation with a trocar, he stuck it into a large middle lobe. It is no wonder!

If the prostatectomy is done in a leisurely manner, one may readily, by putting the patient in the Trendelenburg position and retracting the bladder wound, remove the prostate under direct vision. Though here again the writer's practice is not quite that of most surgeons; he does not care to split the patient to his umbilicus and put his whole hand into the abdomen, but prefers to lift the prostate by two fingers in the rectum and enucleate it by two fingers in the bladder through a suprapubic incision that extends only half way to the umbilicus. Then one may seek for bleeding points and crush them with clamps, or ligature them, or even suture as Lower does, though this requires a larger parietal incision than it is desirable to make and has not been entirely satisfactory in controlling hemorrhage. It is preferable to control hemorrhage by keeping the suprapubic wound wide open.

A variety of pressure schemes have been devised to prevent postprostatectomy hemorrhage. The best of them is either a bag or a long cigarette drain. Until a year ago he used the Pilcher bag, reducing the postoperative discomfort by taking the pressure off the bag in a few hours and removing it on the following day. My house staff has persuaded me that my patients are more comfortable and have less hemorrhage if the bag is not used. In its place, if there is free bleeding, one may pack the cavity with a long cigarette drain, though many patients will lose no great amount of blood if not packed at all, on one condition, viz., that the bladder is so freely drained that clots cannot accumulate in it. For this one may use the Freyer tube or its modification by Marion.

With these three methods of prevention, the three great dangers of suprapubic prostatectomy are well controlled and we need no longer concede to it a mortality greater than that from perineal prostatectomy.*

It is necessary to add before closing that if one speaks of the comparative mortality of various operations, a real comparison is meant. It is impossible to achieve this statistically because no two operators have precisely the same rules for the exclusion of the so-called inoperable patient. When one practices at a city hospital, for instance, one rapidly appreciates that many of the patients who are sent there as inoperable are perfectly operable on the basis that it is better to operate upon them in order that a proportion of them may survive rather than to let them all die for lack of operation. Service at such an institution thus makes one regard the patient's real interests rather than one's operative statistics.

The best that can be done by way of comparing statistics is to compare a series of patients as they enter the hospital and leave it whether they are operated upon or not. The writer has thus classified a series of prostatics that represent about the average run of hospital cases. The operations were done by four surgeons on his service. A little more than half of them were private patients. Almost all of them were operated upon by a two-stage prostatectomy. The series was taken at a time previous to the employment of prevesical section. Seventy-six prostatics entered the hospital and 11 died there, a total mortality of 14 per cent. Yet this series would normally be reported as having only a 5 per cent mortality, because of the 61 patients upon whom prostatectomy was performed only 3 died. For the prostatic himself, matters are not so simple as this. Among our 76 patients, 10 were not operated upon at all; 3 died promptly without operation, and 7 others were temporarily relieved without operation. Then, as we were doing two-stage prostatectomies without prevesical section, we eliminated 4 more who died after preliminary suprapubic drainage and one other who, having been drained, refused prostatectomy. Not more than one or two per cent of patients are permitted to go home drained but without prostatectomy. Thus of the 76 patients, 10 per cent were dead before the prostatectomy was reached, and 10 per cent more had left the hospital without prostatectomy. Unquestionably these patients cannot be put down as cured. Of the remaining patients upon whom prostatectomy was performed, 2 with sclerotic prostates were only partially relieved, 2 with adenomatoid prostates still had between 50 and 100 c. c. of residual urine when last seen, so that only 53 of the 75 cases were really cured by the operation. We have here the opportunity of reporting our statistics as a 5 per cent mortality after prostatectomy, or as a 14 per cent mortality of all the patients who entered the hospital, or as 70 per cent of cures, with 30 per cent of failures, deaths, or temporary reliefs.

These figures are not boastfully cited. The few prevesical sections that the writer has done have eliminated mortality from the first stage of prostatectomy. This will perhaps increase the mortality of the prostatectomy itself but it will leave more patients living and well.

In comparing a series like this with a series submitted to perineal prostatectomy, it would be necessary to count all those who have fallen by the wayside as they approached the perineal peril. This may have been done; but, even if it has, it would not quite complete the picture, for there are circumstances under which a patient's prospects are more or less good under the same management but under different social and hospital conditions. For example, in another service at a city hospital in which a like series of patients were operated upon under my eye by 18 different surgeons, there were 175 patients,† chiefly operated upon by two-stage prostatectomy and 85 of them or 49 per cent did not leave the hospital alive, while a number of others were not entirely relieved.

It is true that such are the statistics of city hospitals. Two of my friends who have services in hospitals in other cities were kind enough to collect a similar series. One of them found that

* This assertion is based upon an experience of five years without a death from infection (except pneumonia or hemorrhage).

† Among these, 26 were not operated upon and 12 died; 98 were drained suprapubically and 33 died; 110 prostates were removed, with 40 deaths.

of all the prostatics entering his city hospital, 47 per cent died before they left it. The second man was able to get only up to 45 per cent. Prevesical section should greatly reduce this mortality.

Summary

1. One-third of all males reaching the age of sixty have prostatic enlargement.

2. One-half of these will have no symptoms of obstruction.

3. The age at which retention usually occurs (75 per cent of the patients) is between fifty and seventy.

4. Carcinoma is more frequent after seventy.

5. Though pathologically the lesions seem allied, in the clinic prostatism and carcinoma are quite distinct. The one does not occasion the other.

6. Acute complete retention occurs in 50 per cent of the patients.

7. It is the initial symptom of one in four.

8. Of 120 patients beginning with acute retention, 27 resumed function, 57 went into incomplete, and 36 into chronic complete retention.

9. Of those who resumed function, one-half were under 57 years of age. Of those who went into incomplete retention, one-half were over 60, and the oldest 73. Of those whose retention remained complete one-half were over 70.

10. For all cases the expectation of life from the first symptom to chronic complete retention seems to be six years for patients under 50, four for those between 50 and 60, and two for those over 60.

11. Relief of retention should precede diuresis.

12. Trauma to the prostate renders catheter life impracticable. The tabetic with an open bladder neck survives catheter life for many years.

13. Radiation may briefly palliate and is therefore appropriate to inoperable patients.

14. Intra-urethral operations have not yet been proved to promise permanent relief.

15. Suprapubic prostatectomy has a greater postoperative mortality, though a less postoperative morbidity, than perineal prostatectomy.

16. Perineal prostatectomy is fit only for the expert.

17. Prostatics entering my service have shown a 5 per cent mortality after suprapubic prostatectomy; yet 17 per cent fail to leave hospital alive. Some 70 per cent of them leave the hospital well —though estimated from the prostatectomy standpoint the cures are 90 per cent.

18. The dangers of prostatectomy are renal insufficiency, infection, and hemorrhage.

19. Renal insufficiency is prevented by decompression to the point of stabilization.

20. Infection is prevented by prevesical section.

21. Hemorrhage is prevented by Freyer drainage.

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ABSTRACT OF DISCUSSION

Of Symposium on Prostatism

John B. Deaver, M.D. (Philadelphia, Pa.): This symposium on the important subject of disease of the prostate has been so comprehensive that there is little to add in the way of discussion.

Dr. Randall has graphically illustrated the three main types of pathology the surgeon may expect to see, while Dr. Bailey has shown us the prostatic as he presents himself with all his problems to the surgeon. Or all *their* problems, for the prostatic is a problem to himself and to his doctor, especially when the question of *palliative* versus *operative* treatment arises—a question which Drs. Lee and Schofield discussed with clearness and precision.

Prostatic hypertrophy is eminently a surgical condition and in my experience the majority of patients can, by a proper course of preoperative treatment, be brought to the stage of a comparatively safe operative risk. Of course, there are exceptions, and one should not hesitate to turn down such exceptions when it is seen that they are not qualifying for safe surgery. These patients can be made reasonably comfortable by palliative treatment, the latter consisting chiefly in the wearing of a soft-rubber catheter, bladder irrigation, etc. The catheter is changed once a week, at which time the urethra is thoroughly irrigated. By corking the catheter there is no occasion to wear a portable urinal. I am able successfully to take out the prostate in the large percentage of the patients who wear the catheter for from six months to as long as a year or more. One patient wore a catheter for eleven years, during which time he was actively engaged in business, with no ill effects from his catheter life. Experiences such as these enable me to make a one-stage operation in 95 per cent of cases. Recently in conversation with my friend, Bentley Squier, he told me he rarely made a two-stage operation.

A few patients wear the catheter while awaiting the opportune time for operative interference. Some of them are loath to abandon the catheter and undergo operation, demonstrating the feasibility of this procedure and the comfort given the patient. From the economic standpoint this is most satisfactory to him who otherwise would be subjected to two operations, with the increased cost. Not enough stress has been laid upon contraction in the operated area that follows a small percentage of cases of prostatectomy and is responsible for suprapubic fistula; if the latter occurs, it is due to contraction, or, if you prefer, stricture. A remote cause is leaving an irregular margin of mucous membrane around the orifice of the prostatic bed. This is particularly true if the posterior margin of the orifice of the prostatic bed is not perfectly smooth, thus favoring a valve-like projection of mucous membrane, occasionally requiring secondary operation on account of obstructing the urethral orifice.

The operation to choose depends upon the local and the general condition of the patient. Personally the

suprapubic is preferred, yet occasionally, the perineal operation is made.

Operative mortality varies. The variation has to do with the seriousness not so much of the operation as of the condition that calls for the operation. In our experience, postoperative mortality is due to uremia, pneumonia, pulmonary embolism, and coronary thrombosis. Death from hemorrhage is rare and if it does occur it is more often a secondary bleeding. Sepsis rarely is the cause of a fatality unless uremia is regarded as such. It is difficult always to distinguish between uremia and sepsis. A large factor in the mortality, is the experience of the operator; but it is not so much the actual difficulty of prostatectomy as the serious nature of the prostatic disease, especially its complications, and more especially when one finds a large diverticulum or a cancerous condition that influences mortality. The experienced surgeon knows how to choose the most favorable time for operation and the proper postoperative treatment upon which to a large degree the success of the operation depends. In other words, the crux of success lies in preoperative and postoperative treatments, which are receiving more and more attention.

With this improvement in the general handling of these patients the prospects of the prostatic have also improved, provided he has not delayed too long before applying for relief. These patients cannot be operated upon too early, but it is certain operation can be too late. Even the octogenarian has a good chance of recovering from the operation and rounding out his remaining years in comfort. The younger man likewise stands a ninety-six per cent chance of operative recovery and of a natural term of life. Pus in the urine may persist for some time after operation, but this need not interfere with either the patient's usefulness or his enjoyment of life.

My experience has been that radium and x-ray do no good in adenocarcinoma of the prostate.

Dr. Lower spoke about taking out the middle lobe. Forceps, devised by the late Sir Henry Thomson, have been used with good results.

Bleeding, following the operation, that cannot surely be arrested by a gauze pack, a purse-string suture carried around the opening of the prostatic bed, tied, and so forth, is rare. This is called a hypnotic suture, as there will be no call at night to control hemorrhage.

Shock is rarely seen except after the administration of intraspinal anesthesia, when occasionally the patient will be greatly depressed, with a rapid and feeble pulse. This is controlled at once by the infusion of 1000 to 1500 c.c. of normal salt solution. If the patients are in good condition, have a good blood chemistry, are not too advanced in life, and do not bleed, it is certain that they will not be shocked. Once I used a rubber bag, but took it out before the operation was finished. Spinal anesthesia is the anesthesia par excellence, unless the patient has very low blood pressure and even with a blood pressure of 70, it is sometimes given. Local anesthesia is not used.

I have never done a vasectomy for epididymitis. Only occasionally does one see an epididymitis after operation that is readily controlled by sane surgical measures; namely, elevation, lead water and laudanum, and ice-bag. When vasectomy for epididymitis was brought out by Dr. White, at a meeting in Buffalo, it seemed a good thing, but later I considered it a very poor thing. Epididymitis is seldom seen after a suprapubic prostatectomy. One patient was so advanced as to suppurate and had to have the testicle removed. Local infection is seldom met. Dr. Keyes' mention of pelvic cellulitis brings back the old gynecologic days. It may be that it was present and unrecognized. I never tear through the prevesical fat, but cut it with the scalpel and tie the vessels. The left middle finger is used to enucleate the prostate.

Gideon Timberlake, M.D. (St. Petersburg, Fla.): With the exception of the x-ray as a matter of relieving hemorrhage, I have been unable to obtain good results from radium implants, so if there is an outstanding condition and an appreciable obstruction prefer a cystostomy using a tube for drainage and doing a colotomy if necessary.

Donald Guthrie, M.D. (Sayre, Pa.): Even a urologist should hesitate to add anything further, but in spite of the multiplicity and the rapid development of urologists, much prostatectomy work must be performed by the general surgeon; and it is from the standpoint of the general surgeon that a few points which have appealed so forcibly should be emphasized.

First, when we are told that the mortality has been reduced by the careful preparation of patients, the selection of operation, and a better and more intelligent aftercare, from a 40 plus per cent down to a 3 or 4 or 5 per cent, it certainly is a silent tribute to the change in methods, especially if one is old enough in surgery to remember the mortality that attended the unwise selection of cases and the unintelligent care of the patient after operation.

Dr. Deaver is correct to say that the operation itself is a small part of the procedure. It is just as important in the treatment of the hypertrophied prostate patient to develop what might be called a prostate team as it is for the surgeon who is interested in the exophthalmic goiter patient to surround himself with the well coördinated type of assistants. The aftercare is nearly as important as the preoperative treatment of the patient.

In selecting the anesthetic for this type of case, ether is to be condemned; spinal or caudal anesthesia, gas oxid or ethylene should be considered.

It was amazing to find the frequency of epididymitis, in our last one hundred prostatectomies, so high as nineteen per cent. In the last four months we have started breaking down what has been a prejudice for the operation of vasectomy. If we can prevent by the operation of vasectomy this painful, debilitating, and dangerous complication, it is well worth our efforts to attempt to inaugurate vasectomy.

Eighty per cent of our operations are done by the two-stage method; it is a suprapubic type of operation. The reason for this is that it is impossible to introduce the underlying catheter in the majority of the eighty per cent patients who are subjected to the two-stage operation; it is impossible to get into the bladder at all because of the trauma before admission. For that reason our percentage of two-stage operations is probably a little higher than in other hospitals for many of our patients have been previously traumatized.

Today with the tremendous reduction in operative mortality, one approaching midlife need not look forward with such great apprehension and dread to an operation.

Emory G. Alexander, M.D. (Philadelphia, Pa.): Statistics collected from the Episcopal Hospital in Philadelphia closely bear out those of Dr. Keyes. This hospital is located in the great mill district in Philadelphia. The men work as long as they can, then drink all the bad liquor that comes their way, and are finally sent to us in very poor surgical condition.

In a series of the last hundred patients admitted to my service at this hospital, 37 were operated upon in the one-stage prostatectomy. Of these, 36 recovered and 1 died of pneumonia. Seventeen patients were operated upon by the two-stage method; 16 recovered, and 1 died, death in this case being due to uremia. This makes a total of 54 with two deaths, or a mortality of 3.7 per cent. Our patients are generally sent to us with acute retention of urine. They have gone along with prostatic trouble for years and then finally develop acute retention, the family physician is sent for, and the patient relieved. This relief is attempted with a catheter, so that these patients are sent to us with a traumatized urethra and prostate and in a very poor physical condition.

Five of these patients were operated upon under local anesthesia, a cystostomy done, and all five died. That makes a total of 59 patients operated upon, with 7 deaths, or a mortality of 11 per cent. Immediately when you have to include these five deaths the mortality increases. The point to be brought out is what happens to the remaining unoperative patients; 24 were discharged from the hospital, and 17 died within a few hours to several days or weeks. Of these 17 patients, 12 died of uremia; 1, of pulmonary edema; 2, suddenly of cardiac failure; 1, of cellulitis of the face, probably erysipelas and cardiorenal disease; and 1 of pneumonia. Something should be done to try to prevent this great waste which is occurring in that class of case. The doctor and the general public are now well educated in regard to treating a case of acute appendicitis. Some crusade should be started to educate the doctor and the general public in regard to these old prostatic cases, especially regarding this instrument manipulation before admission to the hospital. Something should be done to correct this mortality.

Of the patients who recovered or were discharged, 8 refused operation, 3 requested discharge from the hospital and promised to return but never did. One had bilateral pyonephrosis; 2, carcinomas which were determined inoperable and were referred to the radiologic department; 2 had marked cardiorenal disease; 1, multiple sclerosis; 1, diabetes; and 4 had symptoms which did not warrant an operation.

Of the patients who were operated upon, 5 or 0.9 per cent were proved to be carcinoma by laboratory examination. All agreed as to the preoperative treatment particularly as to certain minor details, although we may differ in the operative technic, and as to the postoperative treatment. The mortality depends largely upon the type of patient.

THOMAS C. STELLWAGEN, JR., M.D. (Philadelphia, Pa.): It is unquestionable that the aftertreatment and preliminary treatment of a prostatic patient are very much advanced today because of the great care with which these individuals are studied. One impressive point in this symposium is what can be done for the individual who comes with the malignant prostate. In the Jefferson Hospital it has been a bugbear to see the number of malignancies that come in. Radium has gotten us nowhere. Dr. Loux, at the beginning, thought it was doing some good, but the most it has done is to relieve pain. It has done nothing to lengthen the life cycle. Deep, penetrating x-rays have done some good. Individuals who will not tolerate a catheter (and those are the ones usually suffering from some malignant change in the prostate) must have some relief found for them. Dr. B. A. Thomas had devised a punch that may be used with some satisfaction. These patients could be relieved of their prostatism by the punch operation. The so-called blind punch operation that has been described has a very limited field of usefulness, and if a punch operation must be done, it is better to do it in the open rather than in the dark, although there is a certain limited number of patients who accept this operation with some amount of satisfaction.

I take issue with the necessity of a wide-open operation for the removal of a prostate. At the Jefferson Hospital there has been a mortality rate which is probably comparable with other mortality rates throughout the country and my chief, Dr. Loux, did not do the operation under direct vision. It would seem unnecessary, except if one has to contend with hemorrhage of a character that becomes a serious problem at the time of operation. Then it is, of course, quite necessary to open wider and approach the field with definite surgical precision. The great danger in these prostatics is too much tampering which is often overdone. The consensus of opinion is that early operation will be the eventual outcome in prostatic cases. There is no reason why a man who has a definite prostatic involvement should be permitted to go to the point at which his kidneys have become so shattered by the infection that he becomes a very serious surgical risk. Infection in these patients is dangerous. Dr. Hugh Young, discussing this question with Dr. Loux, said that the one type of individual he did not like to operate upon was the sweet-bladder patient. The patient who is not infected and shows a perfectly clear urine has established no immunity to infection. It is very well to say we do not have these infections, but they do occur. It is preferable to operate upon a patient who has established an immunity to a particular infection.

The three-stage operation, that Dr. Keyes suggested, is most excellent. We tried it out some years ago and were impressed by it in every way. The danger of subsequent infection is one that we must face and the use of the indwelling catheter is favored, provided you have the proper staff and surroundings to care for it, but in my hands it has been a *bête noire*. A suprapubic drainage by the puncture method suggested is preferable to trusting in the indwelling catheter unless there was absolute accord in the previous care of the individual. Under those conditions it is quite permissible, but otherwise dangerous. It has not been necessary in our experience to vasectomize these individuals. Patients with epididymitis come for treatment and there have been several instances in which the testicle was practically lost, but we do not practice vasectomy as a routine.

Dr. Randall (in closing): One or two things have been said that bear very definitely upon my statements. First, in regard to the hypertrophies: Dr. Lower advocates partial prostatectomy for certain patients, and says that if there was a pedunculated middle lobe, he did not mind simply removing it as the obstructive portion and not doing any further work on the prostate itself. We do see patients in whom that lobe alone is hypertrophied. They are extremely rare, but in conjunction with the lateral lobe hypertrophy they are extremely frequent. For this reason it is wrong to consider a partial prostatectomy, unless certain of the absence of lateral lobe hypertrophy.

That brings up a second point which has been suggested by the references as to the cause of residual urine in these prostatics. Every one first pictures that there is a damming of the stream, which is not altogether correct for there are other factors that cause urinary retention. In addition to that one factor of

obstruction, per se, there is the question of bladder musculature, and third, the actual urethral compression caused by intracapsular tension secondary to hypertrophied tissue. Therefore one might think that one has removed the cause of obstruction when doing a partial prostatectomy, but will run short of the mark unless a complete prostatectomy is done at the same time.

A true median bar is rare. It probably will run about 7 per cent in the cases of prostatic obstruction. It is a fibrosis and all you have to do to relieve the bladder of its obstruction is to incise or excise the median bar. Some years ago Dr. Geraghty developed the sphincterotome with which he got just as good results by incising the bar as Young got by excising it. The punch type of instrument should be used for the bar obstruction and nothing else. In obstructions caused by prostatic hypertrophy, the punch will give a certain amount of relief, but the patient will not be permanently cured by it. Punch the localized glandular hypertrophies and, although you will get a temporary result, the patient will be back in a year or perhaps eighteen months and prostatectomy will be necessary. If the punch is limited to the true median bars it is curative.

In regard to the carcinomas, no expected results have been obtained by radiation in its various forms. Deep x-ray therapy relieves hemorrhage and pain, and if the patient has a bladder that is emptying itself fairly well, one will have to be content.

It is time to take exception to what Dr. Timberlake has called synthetic surgery. The work Dr. Lower is trying with hypodermatic medication is interesting, it might be valuable, but I do believe we cannot look forward to doing much with it because it is questionable if sclerosis can be localized sufficiently to control the areas that might be undergoing hypertrophy.

THE COMMON COLD IN INFANCY AND CHILDHOOD*

GIBSON SMITH, M.D.
YORK, PA.

The term cold is a name loosely applied by both the laity and the profession to designate acute catarrhal inflammations of the nasopharynx that are not so clinically distinctive as measles, German measles, or whooping cough as to justify further classification. Should the constitutional reaction to the cold be more severe than usual, the term grippe is often applied.

Although the etiology of the common cold is not clearly fixed, it is the belief of many that nonspecific pathogenic bacteria are causative agents or secondary invaders of importance. In a typical attack, the inflammation is apparent first in the nasopharynx as a sense of dryness or soreness; in a few hours or a day a watery nasal discharge develops; often there is some general malaise and slight fever. After several days the watery discharge becomes by degrees mucopurulent in character and less in amount, fills the nares at longer intervals, and about ten days from its onset the cold disappears. If uncomplicated, a cold tends to be self-limited and of short duration; yet to the complications of the common cold are attributed considerable ill health and loss of life.

Like other acute infections of the respiratory tract, the common cold is generally a disease of the cold seasons; it may vary, from year to year, in the severity of local and systemic symptoms and tendency to develop complications. During his early years a child is more susceptible to common colds, as well as other respiratory infections, than in later life; increased immunity seems to develop in the child as a result of continued exposure to community infections; the speaker believes that this is obvious after the first four or five years of school. This lessened susceptibility should be recognized not so much by the number of attacks as by the length, severity, and tendency to complications. In analyzing the results of our prophylactic and therapeutic methods we should not forget the two factors: possible variation in virulence of the infecting agent or agents and probable development of some degree of immunity in the child.

Prophylaxis and treatment of a disease should be built around the etiology of the disease; and for common colds we may assume, until otherwise proved, that it is an infection of the upper respiratory tract by uncertain or varying organisms. Every mother should know the measures that may make a child less susceptible to colds. Since at the first signs of a cold but few children will be cared for by physicians and as it is at this time that colds respond best to treatment, every mother should know the best way to care for the child at this early stage of the cold and should be urged to do so. The family doctor is the obvious person to instruct the mother; she should understand that the measures that her doctor advises her to use for the child are not specifics, are not miraculous in their effect, but are of sufficient value to deserve practice. Measures to make the child less susceptible to colds are: *A*. Good feeding, which consists not only in attending to the quality and character of the food but also in assuring the child of a sufficiency of all of the vitamins. *B*. Removal of adenoid overgrowth, if it obstructs the nasopharyngeal breathing and drainage. *C*. Removal of chronic infected tonsils if such infection seems definite. *D*. Correction of chronic sinus infections. *E*. Although the wearing of no particular type of clothing insures the wearer against colds, yet a rational arrangement of the child's clothing to prevent sudden changes in skin temperature and maintain the body warmth

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at a comfortable degree is advisable. This applies to the covering of the feet as well. *F.* Older children should spend their play hours outdoors when the weather permits. *G.* For infants and young children, isolation is a practical and important prophylactic measure when other members of the family have colds; for older children, who mingle freely with the family, this is more difficult and sometimes impractical.

Measures to limit or destroy the infection, to cure the cold, may be grouped as: *1.* Measures to maintain or increase the natural resistance of the child to the infection. *2.* Measures to destroy the infection by local chemical applications. To avoid chilling and fatigue are the important factors in maintaining the child's resistance. Most floors are cold and swept by drafts; so older children who often play on the floor with their toys should be protected from this common source of chilling, particularly when they are developing a cold. A few days spent in bed is the best way to avoid chilling and put the child sufficiently at rest. If the parents cannot or will not control the child in this way, a sojourn on a couch, or locating the toys on a table and the child on a chair, are of some value. As long as the child has an abnormal nasal discharge or other indications of illness these measures should be observed. The temperature of the room should be that to which the child is accustomed, and extremes avoided. By the local use of chemicals the destruction of the infecting agent is possible and practical in some cases. This is clinically successful if the infection is located not too deeply in the mucosa or is not in a sinus or passage in which the application will not reach. Since it is not possible to predetermine which cases will not be benefited by local applications to the infected area, all early ones, within two days of the onset, should be given the benefit of the local treatment to see if improvement results. The earlier the case, as a rule, the more likely is the local treatment to be of value. Before a physician uses or directs others to use chemicals in the nostril of an infant or child he should know by personal experience how irritating the solution is. Unless the solution is easily tolerated it should be discarded. The speaker has been using a 10 per cent colloidal silver solution or a solution of one part S. T. 37 to two parts water as a local application. The average parent is less likely to use solutions that stain as early, or as freely as a nonstaining solution. The parents should make the application while the child rests on his back, a small pillow under the shoulders, and the head thrown well back. At hourly intervals for six treatments the application should be made. A medicine dropper may be used to drop the solution into the nostrils. At the end of these treatments, if there is no clear improvement, the local applications should be discontinued. If there is improvement the local treatment should be continued at three-hour intervals for another day. When the mother has tried these measures early in the course of the cold, and the child is not improving, the physician should see the child. He should insist that the child be confined to bed in a room in which chilling will not result if the child becomes uncovered. The child should be encouraged to take water, but not urged to eat. If the bowels are normal, good; if not, an enema, or mild laxative, should be given. Gastro-intestinal disturbances in infants commonly occur with colds; the infant's diet should be modified according to the individual; treatment of the cold is primary, of the intestinal tract, secondary. If the nasal drainage is obstructed, a drop in each nostril of a solution containing one grain of cocain and one grain of camphor to the ounce of liquid albolene or a one per cent solution of ephedrin in albolene should be used to shrink the congested mucous membrane and aid in draining the infected passages and sinuses. Beyond this the physician can but treat symptomatically; in the older children, salicylates or pyramidon for pain, luminol or bromids for restlessness, and belladonna to reduce the nasal discharge. The speaker does not use atropin or belladonna as a routine treatment. More important than the symptomatic treatment is the physical examination to determine early the development of complications. The physician should be reminded of this by unfavorable progress or severity of the case or obvious symptoms of extension of the infection. Common complications are otitis media, mastoiditis, tonsillitis, sinusitis, bronchitis, and pneumonia.

After the apparent symptoms of the cold have passed, the child should be restricted in activity, watched to avoid chilling, and when taken out of doors should be well clothed to meet the weather conditions. Two days might be arbitrarily set for this uncomplicated convalescent period. The child who almost recovers or who requires weeks to regain normal health is probably suffering from one of the subacute complications of the cold. The sinuses particularly should be considered. Tonics for convalescent children are popular with many parents and possibly of some benefit to the child; but when given to take the place of the physician's careful consideration of the pathology involved and his consequent advice, tonics are poor treatment.

CONCLUSION

The family doctor should select the most effective and practical measures for treatment and prophylaxis of common colds. He should teach the families to follow this routine at the first signs of a cold. For severe colds or when the methods of routine home treatment have failed, the physician should be called to care for the child. The physician in caring for the child should keep in mind that uncomplicated colds tend to be self-limited and of short duration, and the complications which some times develop may seriously affect the child's health.

141 E. Market Street.

ABSTRACT OF DISCUSSION

MYER SOLIS-COHEN, M.D. (Philadelphia, Pa.): The common cold, mentioned so much, is some times an infection contracted from others and sometimes a lighting up of a dormant infection present in the individual. A child who gets frequent colds has a chronic infection which may flare up from time to time. The child has received the infection during an attack of influenza, or some severe cold, and while it recovers to some extent and no longer suffers from the symptoms, yet the organisms present in the first infection remain and the child's resistance to these organisms remains low. Consequently the child has an additional attack, and this tendency continues for years and is not outgrown.

It may be that some chronic pathologic condition remains, such as infected tonsils or sinuses, but whether it does or not, it seems that the child undoubtedly has a chronic bacterial infection. The focus of infection is bacterial. The child's tonsils may be removed and the child's sinuses drained, removing the focus of infection, but the bacterial infection remains. The tonsils have been removed (and they may have been diseased, and require removal), but the bacteria remain in the tonsillar spaces after the tonsils have been removed. Often, similarly, in the sinuses, after they have been washed out and the diseased tissue removed, there is still a bacterial infection. Until the patient recovers his resistance to the bacteria, they continue to infect him, even with the diseased tissue removed. It seems the proper treatment is to increase the resistance to the infecting bacteria by means of a proper vaccine. This does not refer to giving cold vaccines to normal persons as a preventive; but to the treatment of a chronic bacterial infection.

The organism causing the trouble should be reached. In these cases, stock vaccine will not do, because the organisms in it have been transferred from culture to culture, and during this process they have lost their virulence. Otherwise stock vaccines could not be given in such enormous quantities.

I use a pathogen-selective vaccine. The organisms obtained are not only cultured in the ordinary culture media, but are also cultured in the patient's own fresh, whole, coagulable blood. The organisms that are able to grow in the patient's blood must be those against which he has poor resistance, while those growing only in the ordinary culture medium but not in the blood, are those against which he has good resistance. Therefore, this vaccine consists chiefly (90 per cent) of the organisms that grow in the patient's blood.

An additional reason that makes me feel this vaccine is specific, is that ordinarily it cannot be given in large doses. Sometimes no more than five million organisms can be given.

J. H. MCKEE, M.D. (Philadelphia, Pa.): Dr. George Wood said: "I feel a draft and immediately my nose is filled up. I knew I was off on one of my classic colds." He said that the draft did not produce the effect, but he felt the draft because already he was infected.

An incident reported about a year ago by Watson, at the Johns Hopkins Laboratories, was very interesting and contained a great amount of suggestive information. A rat was known to be highly infected with organisms producing a symptom ordinarily not found in the infection of the human nose and throat, but is found in dogs and a few other animals. This rat sneezed in the face of a laboratory worker who, exactly two days later, came down with a nasal and throat infection. A short time before, in working with an animal that was infected with bacilli of influenza, the same worker had contracted an influenzal infection.

Economically these so-called common colds are costing us more year by year than all other infectious diseases. A year or so ago, an estimate was made of the amount of money lost in Chicago because of the so-called common cold, and was found to cost Chicago approximately $40,000,000 a year.

We speak of nasal infection, bronchitis, tonsillitis, laryngitis, etc. Our patients have been in the habit of using those terms, but we should reëducate the layman to think that he is far more in danger of becoming infected from the so-called common cold. It should be stressed that it is really an infection.

NORBERT D. GANNON, M.D. (Erie, Pa.): I should like to ask Dr. Smith what success he has had with the use of vaccines or immunogens in the treatment of colds in children?

DR. SMITH (in closing): In answer to Dr. Gannon's question, I have used stock vaccine on children, from one to four doses for a child, and could probably account for twenty-five or more children so treated. This form of treatment is not used to increase the resistance of children to colds, for two reasons: (1) Although the usual dosage of vaccine is not harmful to the child, the immunity to colds, that it developed, has been difficult to demonstrate. (2) The hypodermic administration of vaccine often terrifies the child and makes the doctor's future contact with the child more difficult.

Dr. Solis-Cohen emphasized the advisability to search for some source of reinfection in children who have frequent colds or colds that do not improve. In these chronic offenders an examination is not complete without an x-ray for sinus trouble. For treatment of the sinus infections, the child should be referred to the nose and throat specialist.

A child usually does not outgrow its susceptibility to colds. The average child, as he grows older, is less likely to develop complications, is less severely affected, and can better resist the usual cold infections. This reaction to cold infections should be attributed to some increased degree of immunity against some of the organisms that cause, or are secondary invaders to, cold infections.

The term, common cold, is one which we are outgrowing. A more descriptive term should be applied.

Case Reports*

HEART BLOCK: IMPROVEMENT UNDER BARIUM CHLORID

L. DALE JOHNSON, M.D.
CONNELLSVILLE, PA.

The patient, a white male, aged 66, complaining of a severe substernal pain, was seen at 7.30 a. m. on March 1, 1929. The pain was of a gripping or pressure nature, the character of which he had difficulty in describing. It radiated from the xyphoid to the upper part of the sternum, and to the left side of the chest or cardiac area. The attack began during the night, and believing it was indigestion, he had taken various tablets for its relief, but his condition continued to become more severe. There was no nausea or vomiting.

For about two months this man had not been working, and while at home he was very inactive most of the time, and during these weeks he had smoked cigars continually. On the evening of the previous day he had drunk two quarts of cold tea, which he often did, and had eaten heartily of fried onions. He thought this was the cause of his pain. He had noticed a similar pain previously at different times when he exerted, but it had been mild and soon passed away.

His past history was essentially negative, except that about six years ago he was treated for high blood pressure. Physical examination showed a robust patient having an apprehensive look. The skin was pale and moist; the pupils equal and reacted rather sluggishly. There were many carious teeth and roots, and diseased gums. The chest was symmetrical. Respirations were increased in rate. The lungs were negative. The apex beat was in the fifth interspace, 10 cm. from the midsternal line, and the rate was 40. There were systolic murmurs at the apex and base, which were not transmitted. The pulse was 40 and bounding; the blood pressure, 240 systolic, 120 diastolic. The arteries were moderately sclerosed. The abdomen was negative. The reflexes were normal. The blood Wassermann was negative. The urine was amber; cloudy; acid; specific gravity, 1.026; sugar, trace; albumin, trace; hyalin casts, two plus; granular casts, one plus; pus casts, one plus; pus cells, one plus. The temperature was 99° F. A diagnosis of coronary occlusion, heart block, arteriosclerosis, and hypertension was made. The patient was given morphin (¼ grain), and nitroglycerin (1/100 grain), and put at rest in bed.

At 7.00 p. m., the pain was not so severe, the pulse was 44, and the blood pressure had fallen to 165 systolic and 90 diastolic. The second day the pulse and blood pressure remained about the same; the temperature was 101° F. Morphin was continued for the pain, which was relieved by the third day, and he was put on full doses of atropin. On March 5, the pulse was 35; blood pressure, 120 systolic, 60 diastolic; temperature, 100.6° F. At this time it was decided that the patient also had an infarct of the heart.

On March 7, his condition remained about the same, and Dr. E. B. Edic, of Uniontown, was called in consultation, and, as the atropin seemed to have no effect in relieving the heart block, it was decided to use barium chlorid. This treatment was not started for two days, because of the difficulty in obtaining the drug; and then it was given in 1/3 grain doses three times daily. The patient became delirious, and it was necessary to give him chloral hydrate to keep him quiet and in bed.

On March 14, the patient had a profuse sweat during the night, and his pulse was 56; temperature, 93.4° F.; blood pressure, 180 systolic, 92 diastolic. At this time the barium chlorid was increased to 2/5 grain four times daily, and soon after this time his pulse increased to normal.

On April 23, the patient was allowed out of bed. He did not complain of pain in the cardiac area, and his pulse remained at 72.

On May 7, his pulse was 72, and at this time the barium chlorid was discontinued.

On June 9, he walked to my office, which was about one mile from his home, and after this amount of exertion, he had no dyspnea or pain, the pulse was 68; and blood pressure, 170 systolic, 96 diastolic.

The last examination of this patient, August 29, two weeks after he had gone to work, showed that his pulse was 76, and regular; the heart apparently normal in size; a systolic murmur could be heard at the base; and the blood pressure, 190 systolic, 100 diastolic. The urine was negative.

It would seem that this attack was brought on by the incessant smoking and overindulgence in tea and eating of an already sclerotic and hypertensive patient.

The remedies recommended for heart block are atropin, adrenalin, and barium chlorid. In this case, atropin failed to increase the rate; in fact, it became slower under its use. Adrenalin was considered too dangerous to use in this instance. Sudden death has been reported from its use. Barium chlorid is a comparatively new drug in the treatment of heart block, and little or nothing will be found in most textbooks concerning it, but the literature over the past five years contains several reports on its use. The dose is 1/3 to 1/2 grain, three or four times daily. Twenty grains have been given by mistake, with no deleterious effect, except gastric irritation; although recently McMillin and Wolferth report untoward effect from 1/3 grain, four times a day. In this case, 2/5 grain, four times a day, gave very gratifying results.

709 Second National Bank Building.

PSYCHONEUROSIS RESEMBLING CHOREA

BENJAMIN HALPORN, M.D.
UNIONTOWN, PA.

J. C., a married woman, aged 21, was admitted to the Uniontown Hospital, May 26, 1929, because of an attack of chorea. As she rested in bed, the muscles of the extremities and face were contracting in ceaseless, incoördinate movements. Emotionally she was very unstable, crying, yelling, laughing, and grimacing in turn. The patient had advanced to the fourth month of her first pregnancy. Otherwise, physical and laboratory examinations revealed nothing of importance. Analysis of her life situation showed several interesting facts. Her mother had died when the patient was

* Read before the Section on Medicine of the Medical Society of the State of Pennsylvania, Erie Session, October 3, 1929.

one week old, and the father had married a second time when the patient was two years of age. A definite hostility to her stepmother developed. She was quite fond of her father and felt that the stepmother had supplanted her in his affections. She believed the stepmother gave the other children prettier clothes and was more partial to them.

When about fourteen years of age, an older girl friend was stricken with chorea and confined to her room for several weeks. Our patient spent much time with this friend and the movements and grimaces made a deep impression on her mind. At a later date, a school physician told the patient that she also had a tendency to develop chorea.

At nineteen, much against the wishes of her father, she married a man from another racial group, and again a great mental conflict was engendered. She desired to please her father, but was much in love with her husband. Her husband's relations lived in close proximity to her home and were a constant source of irritation. We believe that the symptoms presented by the patient were the result of situations which the patient was unable to meet squarely, and so formed an escape mechanism from the intolerable realities of life.

The patient was put to bed and visitors excluded from the room. After her confidence was gained, the symptoms were explained to her. Suggestions and encouragement were used and the patient was urged to believe that she would soon get well. A conference was held with her father and husband and the necessity for the removal of harmful influences about the patient pointed out. The incoördinate movements and emotionalism began to lessen and finally to disappear. The patient promised to meet life's problems with more understanding and on the day of discharge, June 18, 1929, all symptoms had disappeared and she was in a much happier frame of mind. At the present time, there has been no recurrence of symptoms and it is hoped that with the birth of the baby, a complete recovery will have been accomplished.

302 Citizen's Building.

HYPERNEPHROMA WITH ARTERIAL METASTASIS

PAUL G. McKELVEY, M.D.
GREENSBURG, PA.

On November 10, 1926, a white male, aged 54, a glass worker, complaining of pain in the right loin, was admitted to the hospital.

He had always been robust and in good health until six months before when he began to notice a dull, aching pain chiefly in the right loin, occasionally radiating towards the back and right scapula, which has been present, with remissions, ever since. Two months later he noticed blood in his urine, which lasted for several days and has continued irregularly intermittent. Occasionally there was frequency and dysuria, the latter followed by passage of several small blood clots but nothing simulating real renal colic. He complained at this time of weakness, and dyspnea upon exertion. His appetite remained good. There was no nausea or vomiting. The respiratory, cardiac, and nervous systems were found to be negative for symptoms.

The patient's past medical history is uninteresting except that he had typhoid fever at the age of 16. There was no history of other severe illness or accidents. His wife, seven sons, and three daughters were all living and well.

A physical examination revealed the patient to be fairly well developed and well nourished and apparently not in any discomfort on admission. Blood pressure: systolic, 110; diastolic, 80; the temperature was 100° F.; respiration, 25; pulse, 100. There were several carious teeth and some pyorrhea; otherwise the head and neck were negative. The chest expansion was good, free and equal, and breath sounds equally soft and vesicular on both sides. The heart was negative. A somewhat thick-walled abdomen was slightly distended and a rather indefinitely nodular tumor was palpated in the right loin, immovable and not descending on inspiration. Extremities, as regards reflexes, etc., were negative.

The specific gravity of the urine varied from 1.018 to 1.028; it was cloudy at seven of ten examinations; showed a trace of albumin at two of ten examinations; leukocytes, at eight; and red blood cells, at eight, including three catheter specimens; occasional hyalin cast, at two examinations. The red blood cell count was 4,200,000; the white blood cell count, 10,800; hemoglobin, 65 to 70 per cent. The blood Wassermann test was negative. Blood and urine cultures were negative. The nonprotein nitrogen content was 42 mg. per 100 c.c. of blood. Cystoscopy showed a normal bladder. Both ureters were easily catheterized. No pus was found in either kidney. A pyclogram showed marked dilatation of right ureter at the renal end, suggestive of a neoplasm encroaching on the calices and pelvis. The vesical end of the right ureter was quite tortuous.

It was decided to operate, and Dr. L. M. Sankey performed a right nephrectomy. At operation he found a large nodular kidney, with friable capsule. The pathologist reported hypernephroma. The patient made an uneventful recovery.

The patient was readmitted to the hospital on April 20, 1929. Five months previously he had noticed a swelling, developing at the back of his neck, then one in the right biceps, one in the left gluteus muscle, and two small swellings on the inner side of the left thigh, all painless. Recently he complained of pain at the site of operation and found a large swelling was developing there. All these tumors were circumscribed, compressible, and fluctuating. An expansile pulsation was present accompanied by a bruit synchronous with the systole of the heart.

The patient was not in any pain but complained of weakness and dyspnea and had lost weight. His eyes had become more prominent, the sclera jaundiced. The teeth were carious. Changes in the chest findings were most marked. Expansion was slight, but apparently equal, with shallow respiratory excursions. There were many pulsating blood vessels in the neck and upper chest area. The percussion note was hyperresonant over all, with indefinite areas of flatness, especially marked in the left upper lobe posteriorly. Breath sounds were bronchial and hoarse in certain areas. Vocal fremitus was apparently equally increased on both sides although slightly louder at the left apex, posteriorly. Whispering pectoriloquy was also present in this area.

The heart's maximum impulse was in the sixth interspace inside the midclavicular line. There was a presystolic murmur at the mitral area transmitted toward the axilla. A presystolic thrill was also present here.

The x-ray of the chest showed numerous metastatic areas in both lungs and in the mediastinum. There were metastatic growths in several dorsal vertebræ, one in the occipital bone, and one in the fourth rib on the right side.

The patient continued to become weaker and died on June 22, 1929. The x-ray findings in the chest and bones were confirmed at autopsy. The liver contained several metastatic growths. The pathologic examination of the sectioned metastatic growths showed a highly vascular connective tissue arranged more or less in columns and a parenchyma composed of many nucleated cells, rather translucent, and of an endothelial character.

129 N. Main Street.

SUMMARY OF AN UNUSUAL NUMBER OF CANCERS IN ONE FAMILY

THOMAS T. SHEPPARD, M.D.
PITTSBURGH, PA.

This is a brief record of a mother and three sons who have had cancer, one of the sons having two distinct types of carcinoma, three out of the four being dead, with the fourth at the present time in the terminal stage of cancer of the rectum.

The total number of this family was 9, one sister dying in infancy, cause unknown; one sister dying at the age of 50, of pulmonary tuberculosis; one brother alive at the age of 78, who has had a cerebral hemorrhage; another brother dying at the age of 60, of cerebral hemorrhage; and the father of the family passing away at the age of 57 of some form of acute cardiovascular disease.

The individual histories are briefly as follows:

CASE 1.—T. H. S., white, male, presented himself seven years ago, at that time aged 54, with a small ulceration on the membrane of his mouth cavity, situated on the right side between the lower jaw and the base of the tongue. He had noticed this about a month before and it had shown no intention of healing. The lesion was an ulcerated area about one-half inch in diameter with rather ragged, indurated edges, and bled easily. His past history was of little importance, except that he smoked many cigars. He was taken to the hospital, and a frozen section was made of a piece of the ulcerated area, which showed carcinoma, proving later to be squamous cell in type. The glandular structure of his neck was dissected out at the first operation, and ten days later the growth was removed by cautery. He was given subsequent x-ray and radium treatment, and up to the present has had no recurrence of the growth. About eight months ago, however, this same patient, now aged 61, presented himself with a complaint of frequent, and occasionally bloody, bowel movements, with indigestion and feeling of distention. Rectal examination showed a mass about three inches from the anus, which apparently encircled the bowel. Section of a piece of this proved it to be an adenocarcinoma. The abdomen was opened with a view of doing a colostomy, and later trying to remove the growth, but metastases were found in the liver, so there was nothing done except the colostomy. He is now in the terminal stage of the disease.

CASE 2.—H. R. S., a brother of the above, aged 58, presented himself about two years ago, with a moderately large ulcerated mass in his mouth, apparently starting between the cheek and the left lower jaw. This was of about three months' standing and proved to be a squamous cell carcinoma. Consultation with surgeons proved it beyond operative procedure, and he was given persistent treatment with deep x-rays, but died after about one year, during which time practically the whole of the left side of the face eroded away.

CASE 3.—J. S., a third brother, died about the age of 50, from cancer of the stomach. No operation or autopsy records are available, but it is claimed that clinically he had a typical case of cancer of the stomach.

CASE 4.—Mrs. J. S., the mother, died of a cancer of the left breast. Here again, there are only clinical records. The rest of the family history has been given briefly in the opening paragraph.

The striking points are that out of a family of 9, or 8, if we disregard the infant who died before reaching cancer age, we have four members of a family who have had fatal cancers, one individual who has had two distinct types of cancer, and two of these individuals who have had the site of the growth in the mouth, which site is rather unusual.

1004 Highland Building.

ELECTROCARDIOGRAM OF DEXTROCARDIA

AUGUSTUS S. KECH, M.D.
ALTOONA, PA.

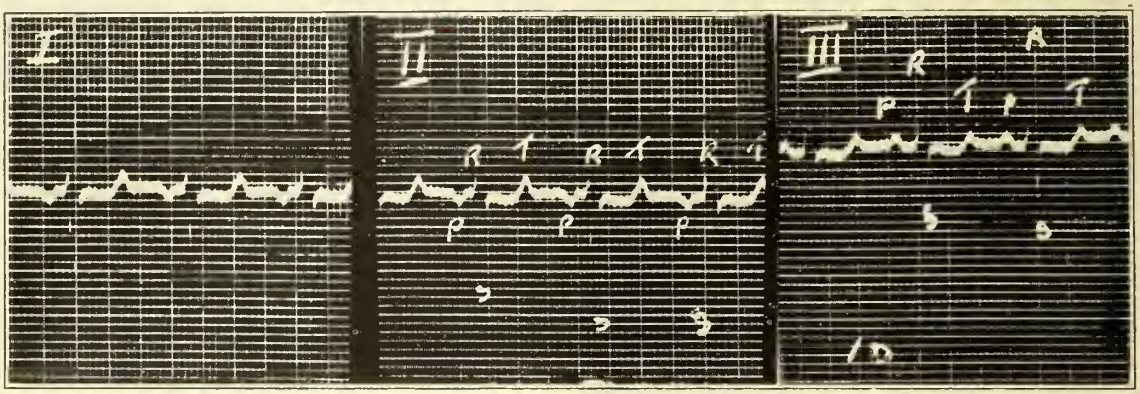
A normal heart writes its characteristic electrocardiographic curve, if situated in a certain position in the chest, which we call normal. When this position is changed either by a predominance of one of the ventricles, by abnormalities of the conducting system, or by a change in the axis in relation to the three leads of the electrocardiogram, a different curve will be projected on the film. The congenital heart with a dextrocardia position is spoken of as being inverted in its electrocardiographic waves, or as if one were writing upside down.

This case is placed on record as a heart with a dextro position with curves that do not follow the usual tracing of these cases, without any definite explanation of the reason. The tracing of the three leads is one of a dextrocardiogram with the most marked deflection of the Q, R, and S waves down in lead I and up in lead III. The P is down in lead I and II and up in lead III. The T wave is up in all leads.

C. D., a female, aged 20, only daughter of a 52 year old brass molder who is well except for the secondary anemia of chronic lead poisoning. Her mother is 50, and well. The mother says that she had a threatened abortion at four months during the pregnancy. Labor was prolonged, with a face presentation and forceps delivery. On the second day the baby had some kind of an attack in which the eyes were deviated from the usual axis. She became fussy and cried much after that time. The mother thought there might have been some change in color but was uncertain on this point.

The baby remained fussy for a month and coughed much during that period. Then she had developed normally after this time, except for winter colds and coughs which occurred with great regularity, confining her to the house for one or two weeks. She had croup once. She had measles, chickenpox, and pertussis, without any noticeable sequelæ. She had a mild attack of influenza in 1918. The tonsils were removed when she was six years of age. Her doctor thought that she was getting chorea at ten years of age but her mother was inclined to attribute the nervousness to a fright.

During her school life the patient was as active and strenuous as other children, and participated in all the games of a normal child. She kept up with her grade with ease and was very alert. Menstruation was established at fifteen with a 28-day interval, lasting five days, and rather profuse.



At eighteen years of age she had a nosebleed which required packing. After this time she noticed dyspnea on exertion. One year later she had a repetition of the nosebleed, only much more severe. Following this she noticed increased dyspnea on slight exertion. She has never been employed but can do the lighter work about the house. She had a tooth removed, which caused persistent bleeding.

Physical examination showed a white female; weight, 118 pounds; height, 63 inches; fairly well developed and nourished. The head was negative except for a very prominent lower mandible and enlarged turbinates. The chest was long, and fairly well developed. Inspection showed pulsation well out in the midclavicular line, on the right side of the chest. On auscultation, a loud blowing murmur, systolic in time, was heard best at the second right chondrosternal interspace, but heard also over the whole basal portion of the heart area, but not transmitted to the back or to the neck. The roentgenogram of the chest showed the heart shadow situated on the right side, and lung marking normal except for some enlargement of root shadow on the left side. The liver extended two cm. below the costal margin on the right side. The roentgenogram showed all organs to be normally placed in the abdomen. No apical pulsation was seen or heard on the left side.

1410 Twelfth Avenue.

STAPHYLOCOCCUS AUREUS BLOOD-STREAM INFECTION IN A CHILD, WITH RECOVERY

WILLIAM A. BRADSHAW, M.D.
PITTSBURGH, PA.

J. L., a boy aged 6, was admitted to the Columbia Hospital, Wilkinsburg, December 26, 1928, complaining of stiffness and soreness of the neck and right hip with associated weakness and fever. The child had always been in good health, aside from the usual diseases of childhood. A tonsillectomy had been done eighteen months previously. Two weeks prior to the hospital admission the patient was seized with what the family physician, Dr. Beggs, thought was influenza, as it was during the prevailing epidemic. He was kept in bed for a period of two days which was followed by an apparently normal convalescence. Six days prior to hospital admission he complained of soreness at the base of the occiput with associated stiffness of the neck, the slightest rotation of the head causing severe pain. With this there developed pain and stiffness of the right hip, it being held in constant flexion. The temperature, which was mild at the onset, became progressively higher, the child grew more toxic, complaining of difficulty with vision and being mentally confused at times to the point of delirium.

On the fourth day of his illness he was seen, with Dr. Beggs, at which time the physical examination was practically negative aside from tenderness at the base of the occiput, rigidity of the neck and right thigh, and a temperature ranging from 100° to 104° F., with a proportionately rapid pulse. A lumbar puncture revealed a clear spinal fluid with a cell count of 22 polymorphonuclear leukocytes, and lymphocytes in equal number. Since the child grew progressively worse, he was brought to the hospital, his temperature on admission being 103.8° F.; pulse, 120; respirations, 32. The blood examination showed: hemoglobin, 65 per cent; red blood cells, 4,200,000; white blood cells, 17,250; polymorphonuclear leukocytes, 83; small mononuclears, 6; lymphocytes, 11. Repeated urine analyses were negative. Roentgenographs of the right femur, hip joint, vertebræ, and chest were essentially negative. An examination by a rhinologist revealed a slight purulent ethmoiditis and a mild suppurative otitis media which was drained, the culture of which revealed staphylococcus aureus. As repeated examinations of the ears had been made from the onset of the illness and found negative, it was thought that the mild otitis media was secondary and indicative of the lowered state of resistance.

At forty hours a blood culture, which was repeated and confirmed, revealed a luxuriant growth of staphylococcus aureus. There being no appreciable source of infection that could be attacked it was thought that intravenous dye therapy might be worthy of trial. Accordingly, on the fourth day after admission, he was given 10 c.c. of a one per cent solution of mercurochrome (220 soluble), with no apparent reaction other than a rise of 2.4° F. in temperature, with later a drop of 3.6° F. Two days later he was given intravenously 10 c.c. of one per cent gentian violet, which was repeated on two successive days, and followed again by

mercurochrome. During this period there was an appreciable lowering of his fever and his general appearance was one of improvement. Superficial abscesses which developed in the occipital region of the scalp and over the right trochanter were drained by Dr. William Hetzel, cultures of which showed staphylococcus aureus. On the seventh day after first giving the dye, a blood culture was found to be negative and the highest temperature was 99.8° F. Following this the patient steadily improved and left the hospital on the twenty-eighth day after admission, apparently well, the leukocyte count on discharge being 5750.

In addition to the dyes, the patient was given a daily subcutaneous injection of staphylococcus immunogen, the dosage being 2 c.c. at onset and gradually reduced following the negative blood culture.

The gravity of a staphylococcus blood-stream infection is appreciated by all, particularly so in those cases in which there is no appreciable focus to make surgical intervention possible, in contrast to those in which drainage can be established, as in osteomyelitis, from which probably the majority of the cases will have a positive staphylococcus aureus in the blood stream prior to drainage.

Churchman, in a very conservative résumé, is of the opinion that gentian violet is definitely beneficial to the patient, though its action is not understood. Experimentally it has been disappointing as have all the other dyes. The importance of using more than one dye has been brought out by several persons. Apparently there is but a bacteriostatic action with the use of gentian alone, whereas in combination with such dyes as mercurochrome or acriflavin more satisfactory results are obtained.

The recovery of this patient according to our experience was unusual. That it was a result of the therapy used is more than we would care to state. It is presented as a case that was of extreme interest to all those associated in its treatment.

4634 Fifth Avenue.

ABSTRACT OF DISCUSSION

William W. G. Maclachlan, M.D. (Pittsburgh, Pa.): Dr. Sheppard has said about all there is to say regarding carcinoma.

Dr. Bradshaw's case is very interesting, because there is the impression that, from the point of view of internal medicine, staphylococcus aureus infection is fatal. The surgeons claim that in osteomyelitis in children they frequently find the staphylococcus aureus in the blood stream and that by draining the area they get cures. One question always arises, and that is contamination of the blood culture, the staphylococcus being a particularly common contaminator. In staphylococcic pyemia, the patients develop multiple abscesses, and the kidney usually shares in this. That is why, as a rule, a positive staphylococcus blood culture is usually fatal. Dr. Donaldson, of Pittsburgh, has told me that he has seen several cases of proved staphylococcus aureus infection in osteomyelitis, and when the area was drained, the patient recovered.

Mercurochrome has been known to produce fatal nephritis, although it has been associated with rather an unusual response in positive blood cultures. In general, mercurochrome is given today more or less as a last resort, when it is a question either of death or giving mercurochrome.

Earnest W. Willetts, M.D. (Pittsburgh, Pa.): It is common for localized staphylococcic infections to recover; but when the infection is in the blood stream, it is one of the most uniformly fatal of any pyogenic infection, although there are a few recoveries.

In studying blood-stream infections, the culture should be taken in such a way that an estimation may be made of the amount of infection in the circulating stream. One staphylococcus in 20 c.c. of blood is a very different thing from 1000, or perhaps 2000 staphylococci in 1 c.c. of blood. If the culture is made on media, which is the usual practice, there is no way of telling whether there has been one microörganism in the quantity estimated or many, and this probably accounts for some of the differences in the outcome of these cases. If the cultures are plated they will be much more valuable, and the internists should get in touch with the laboratory men in these cases and try to learn why some of these patients get well and some do not. Many men will tell you that they have frequently seen pyemias with staphylococcic infection that recover, but the cases are not of the type Dr. Bradshaw has reported, which are usually fatal. If the amount of infection is measured, it may tell why some patients recover and some do not.

Augustus S. Kech, M.D. (Altoona, Pa.): It is appropriate to discuss Dr. Sheppard's case in the light of the work of Dr. Maude Slye, of Chicago, who studied 5000 rats, and has made the particular point in all instances of watching the history of the familial cases. The point she brought out was that a cancer family marrying into a cancer family usually produces cancer in subsequent generations; and if they do not intermarry or breed with another cancer family there is much less likelihood of cancer developing. Could Dr. Sheppard get a history of cancer in the family?

Dr. Sheppard (in closing): Three or four generations of this family have been traced, but, unfortunately, these records are rather sketchy, and even in the available death certificates some were signed tumor of the abdomen, which could be almost anything, and after a study of the material it was decided that it was probably some form of cystic ovary. It is very difficult to secure reliable data from these families after fifty years back. In investigating other branches of the family, it is certain that there were cancerous growths, but apparently not so closely related as the family reported, and they could be explained on other bases, taking a certain number of individuals.

Probably there are many men who are doing medical work of this nature, and year after year have seen the same families. Most of us have not taken the question of family histories with as much seriousness as it deserves. Some years ago in working up a history of a family who had some endocrine disturbance, it was amazing to follow out three generations and find the number of endocrine disturbances that were perfectly evident in the family, particularly thyroid disease and diabetes. All the men who practice general medicine should keep on their records, as best they can, in the short period of time they have for taking histories, small notes, and then go over them from the family history standpoint. In certain types of disease we have gone

about as far as we can in the treatment, and it will get to a place where we have to refer to some of the principles of breeding and trying to weed out, as the generations go on, certain types of disease.

THE LIFE OF SIR WILLIAM OSLER

"Given the sacred hunger and proper preliminary training, the student-practitioner requires at least three things with which to stimulate and maintain his education, a noteboook, a library, and a quinquennial brain-dusting. I wish I had time to speak of the value of note-taking. You can do nothing as a student in practice without it. Carry a small notebook which will fit into your waistcoat pocket, and never ask a new patient a question without notebook and pencil in hand. After the examination of a pneumonia case two minutes will suffice to record the essentials in the daily progress. Routine and system, when once made a habit, facilitiate work, and the busier you are the more time you will have to make observations.....Begin early to make a threefold category—clear cases, doubtful cases, mistakes. And learn to play the game fair, no self-deception, no shrinking from the truth; mercy and consideration for the other man, but none for yourself, upon whom you have to keep an incessant watch. You remember Lincoln's famous mot about the impossibility of fooling all of the people all of the time. It does not hold good for the individual, who can fool himself to his heart's content all of the time. If necessary, be cruel; use the knife and the cautery to cure the intumescence and moral necrosis which you will feel in the posterior parietal region, in Gall and Spurzheim's centre of self-esteem, where you will find a sore spot after you have made a mistake in diagnosis. It is only by getting your cases grouped in this way that you can make any real progress in your post-collegiate education; only in this way can you gain wisdom."

THE PHARMACOPŒIA AT WORK

E. Fullerton Cook, chairman of the U.S.P.X. Committee of Revision, has an enlightening article on this subject in the *American Journal of Pharmacy*, April, 1930. We quote the following in regard to that portion of the article devoted to the Pharmacopœia and the physician:

Most will agree that the successful "treatment" of disease is the doctor's biggest and most difficult problem. Today in the *Pharmacopœia* many remedies are found which, when skilfully employed, by those who are trained and who are given the opportunity, approach that miracle-working power which has been the dream of the ages. A number of official products are given that would seem to be a formidable list of remedies for any one physician to gain intimate experience with, but here enters the nation-wide application of the *Pharmacopœia;* it is not for local use, its aim is to meet the needs of every doctor of every class and preference. But with greatly varied choice, a selection representing the best judgment of a group of therapeutic experts, and chosen without favor or pressure from all available materia medica, why do not these Pharmacopœial products stand all sufficient and alone among world remedies? Essentially they do, notwithstanding the belief of many to the contrary.

In the Charter's Report study about 72 per cent of all remedies prescribed by physicians in 17,000 representative prescriptions, from every section of the country, were official in the U.S.P.X. in a study by the writer in twenty-five cities of the United States two years ago, from California to Maine, and 72.9 per cent of the ingredients in 12,000 prescriptions were official in the current *Pharmacopœia;* among the ingredients in the many hundreds of formulas standardized within the last two years by the American Drug Manufacturers Association, over 82 per cent are now U.S.P. substances; a study of the formulas in the catalogue of the largest physicians' supply house in America, formulas which must represent the demands of American doctors, show about 73 per cent of the ingredients to be Pharmacopœial, and finally a tentative analysis this year of 19,000 prescriptions, made by a committee making a national survey, indicates 82 per cent of U.S.P. ingredients among those prescribed. Such statistical evidence indicates the importance and value of the present U.S.P. therapeutic agents in medical treatment and the extent to which they are known and demanded by the physicians of today.

True the doctor does not often own or use a *Pharmacopœia* as such, but up-to-date treatises on therapeutics, books like *Useful Remedies* of the A.M.A.; Fantus on *The Technique of Medication;* the courses in pharmacology and therapeutics of the medical schools, the A.M.A. *Epitome of the U.S.P. and N.F.*, and even the representatives of pharmaceutical manufacturers carry many U.S.P. drugs to the doctor, though they may sometimes be in other than official form or combination.

It is not surprising that all medicines used are not in exactly the U.S.P. form. There are many reasons for this: The U.S.P. contains but one tablet, the "bichlorid tablet," and yet tablets are a popular form of medication today. But here the U.S.P. is serving an essential service for it standardizes most of the remedies entering these tablets. The same is true of capsules and ampules, both extensively used and popular forms of medication. Shall the U.S.P. extend its titles to cover the thousands of varieties of tablets, capsules and ampules in use or is it fulfilling its purpose by holding up the standards of strength and purity for the ingredients entering these?

Another potent reason for the manufacturer adopting other than U.S.P. forms of medication is the fact that all U.S.P. preparations are necessarily on a price-competitive basis which renders them more or less unprofitable items to sell. This is an economic situation which must be recognized and corrected, if possible. "Quality" rather than "price" should dominate the selection of medicines, but, once again, if all manufacturers claim to meet the U.S.P. standard the quality argument disappears and price dominates to the disadvantage of those most conscientious and careful.

Still another influencing factor in the adoption of a specialty, even though that may practically parallel an official product, is its control through a trade-marked title and the many advantages this offers to the owner. Neither is it likely that when the Food and Drugs Act was proposed and passed in 1906 that any of its enthusiastic advocates foresaw the possibility of manufacturers finding it advantageous to promote other than U.S.P. and N.F. products and thus avoid the legal control of standards, yet that is another of the influences back of the medical "specialty" of today.

Some American courts, correctional and penal institutions, are becoming laboratories, instead of simply places for trial and the deprivation of the liberty of human beings. It is from such laboratories that the newest facts are coming, statistical, psychological, and physiological, facts extricated from the complex personalities of prisoners, after long and sympathetic study. —*E. R. Cass, The Crime Problem.*

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Editorials

MENTAL HYGIENE AND THE EYE, EAR, NOSE, AND THROAT SPECIALIST

In the light of recent advances in the study of tonsillar disease and diseases of the accessory sinuses in their relation to nervous and mental diseases, the specialists covering these fields are in a position to make excellent contributions to the mental health of society.

Primarily, they are in the best position to make the most complete examination of these parts, to evalue the pathology present, and to advise local treatment or surgical interference as indicated. With this new knowledge they are also in a position to appreciate the necessity of establishing in their patients the proper mental attitude toward the conditions from which they suffer and to distinguish the usual apprehension and concern from symptoms of more grave and serious nature, such as presented by the psychoneurotic and the psychotic.

In the treatment of the first group of patients, the specialist is in his own field and acts accordingly. In those cases of neuroses, psychoneuroses, and psychoses showing diseased conditions of these parts, psychiatric counsel and advice would be exceedingly helpful to him before instituting any radical procedures; such counsel removes the possibility of any other underlying causes of the nervous and psychiatric state.

In the light of the controversy of infected teeth, tonsils, and sinuses being exciting factors in the cause of psychoneuroses and psychiatric states, regardless of one's point of view that these infections do act as causative factors, or act as contributory factors, or that many a nervous patient has been subjected to unnecessary surgical interference, in the last analysis whether surgical interference should be instituted is a decision to be rendered by the specialist in these diseases. Such a decision, however, should be based on criteria of his experiences in his speciality and he should not be swayed by statements that removing teeth, tonsils, and radical sinus operations cure nervous and mental states.

In those patients suffering from conditions of the eye and ear that will, regardless of all known therapeutic procedures, result in blindness or complete deafness, the specialists in these fields can make a tremendous contribution to the mental health of these patients by developing in them the proper mental attitude to the situation in which they will eventually find themselves. Neuropsychiatrists have had under their care mental patients in whom the basic cause of their psychoses was an inability to make such an adaptation unaided and unguided.

THE SPIRIT OF THE GENUS ANTI

All know the delightful story of the puzzled immigrant who, quizzed by the ward boss whether he was a democrat or republican, could only ask, "Have they a government here? Then put me down as agin the government." However often repeated, this story is never old because it is so freshly and variously illustrated every day about us. There is, taken in a lump, a preposterously large number of persons who would go crazy or die if they could not array themselves as "agin" something. In some instances the psychologist is compelled to diagnose his cases as instances of inflammatory egotism, delirium grandiosum, etc., etc., because there are not infrequently the most patent evidences that the anti is far more interested in himself than in the cause antied. These characteristics are fatally likely to become the genuine and principal causes of reactionism and stolid conservatism. All good and careful persons are by sheer disgust compelled *stare super antiquas vias,* so that the anti is the very worst enemy of the cause he advocates. He produces the very evil he rails at. If his cause is good, or has any element of truth in it, the anti will contrive by his narrow violence and vain-glorious captiousness to render this good and true both evil and false, and in disgust all sensible persons will "shut up" and disassociate themselves from the

cause made ridiculous by its advocates. In these days of antitoxins let us hope that a great benefactor will arise and that he will discover some anti-antitoxin as a universal prophylactic against the scourge.

MENTALLY ILL AT LARGE

The mentally ill at large has become a serious factor in modern life. It is difficult to get medical men to certify to a patient's insanity and fitness for detention in a public or private asylum, because they know that if the patient gets temporarily better and is released he will almost certainly bring action against them. Physicians who have had experience among mentally ill are only too familiar with the vindictive delusions of the chronic mono-maniac and refuse point-blank to sign certificates consigning such people to asylums so long as the present state of the law does not prevent legal proceedings on his return to apparent sanity.

As a consequence, the number of persons who, in their own interests, as well as in those of the community, ought to be in asylums has become ominously large, a fact which more than one tragedy has brought home to popular knowledge. This situation is capable of remedy by the addition of a simple and short clause or law guaranteeing to medical men the same security that judges enjoy when in their judicial capacity they impose upon their fellow citizens punitive sentences.

CLINICAL PICTURES AND MEDICAL PERSPECTIVE

A Chinaman painting a picture on a fan is likely to depict the house in the foreground no larger than the man on the hill in the background of his picture, while the man may be much larger than the bridge in front of him which he apparently intends to cross.

In many other matters besides in painting pictures it is important to see things in their right perspective. The most important obstacles to progress and causes of failure in the world are not those that arise when persons see the right and refuse to act in accordance with their best knowledge and belief, but when they fail to see things in their right proportions. Before we rest satisfied that our clinical picture is complete we should look at it in all lights and from many standpoints. Many a patient has died because his attending physician has failed to make an early diagnosis on account of neglect to gain light for his clinical picture by the use of his own fingers, eyes, ears, and microscope. Too often the patient's statements are accepted without examination; we get the proportions for our clinical picture from the patient's standpoint rather than our own.

The question of perspective is equally as important in judging the work of others. Probably no one always succeeds in getting the exactly right perspective in everything; no two persons always see things in exactly the same way, a fact having its important bearing on all organized efforts. There are few men who would endorse everything in the policy of their political party, yet they believe that the general trend is toward the right, and religious and political organizations continue to exist, as much to the benefit of those who only stand back and criticize as of those who bear the burden of the work. In striving for the advancement of the human race against disease, or promoting better physical development by rational hygienic measures, the medical profession is often combated by selfish quackery and popular ignorance. It is highly important in all things touching our professional life, that we make certain we have looked upon all questions from high, unselfish standpoints and that we have the right perspective, whether in matters concerning our national or local organizations, our medical journals, or in our relations with fellow practitioners or patients.

GEOGRAPHY AND ETHICS

Laymen hear a great deal from physicians about professional courtesy. It is difficult sometimes to induce a doctor to treat one's infirmities until he obtains the permission of his predecessor in the case. Beautiful perhaps in theory, this strained politeness seems often to the patient to be carried to ridiculous if not dangerous lengths.

It is apparent, however, that his professional courtesy, while it has its rules, boasts its exceptions also; and the exceptions seem to be as much without reason as the rules themselves. Why, for instance, when it is not allowable to treat the patient of another who resides in the same town, is it permissible for the city physician to leave his own practice in the hands of an assistant, and, combining business with pleasure, invade the bailiwick of his country brother, set himself up in some summer hotel and attempt to steal the short, rich harvest with thoughts of which his poor confrère has solaced his long midnight journeys over unbroken roads to the bedsides of the sick during the winter months? Or is it not permissible, and are those who do it guilty of unprofessional conduct which lowers

them to the plane of the quacks who advertise through the newspapers rather than through their wives and daughters who roam the hotel corridors and tell their suffering fellow guests how lucky they are to be taken ill just while Dr. ——— is there for his well-earned vacation?

HOSPITAL AND MEDICAL SCHOOL MANAGEMENT

A revolution in the management of hospitals and medical colleges is quietly taking place that is of profound and far-reaching importance. Lay governors and lay boards of trustees are becoming the depositaries of power in all things not pertaining to the cure and prevention of disease. As to the reasons for it, these may differ in each case, but as to the result on the whole it may be said that where it has been tried, the lay government of these institutions has proved better than has that of the profession. The work of medical men is with disease and therapeutics; that of business and nonmedical men is with finance and social life. In some hospitals and colleges it has been found best that even the choice and appointment of medical men themselves to positions is best left to the lay boards. The change is of inestimable benefit to the profession and to the public; we are relieved from onerous work for which we have no training, and are permitted to expend our whole energies on teaching, prophylaxis, and therapeutics; the public wins thereby and from the work of the laymen in new fields. It is an illustration of the beneficence of the law of differentiation of function in civilization.

SCOPE AND AIM OF THE COMMITTEE ON THE COSTS OF MEDICAL CARE

A two-days' session of the General Committee on the Cost of Medical Care was held in Washington, D. C., on May 2 and 3. The Committee is now in its third year of the five-year plan adopted at its inception, is well organized, and is increasing in its potentiality for constructive work. Concerted agreement exists as to the nonexpression of conclusions until the entire study will have been completed. The following principles were promulgated by Ray Lyman Wilbur, M.D., chairman, Secretary of the Interior, and were heartily endorsed and approved:

1. The personal relation between physician and patient must be preserved in any effective system of medical service. Medical service is and doubtless, by its very nature, must remain a distinctly personal service. Even in this stage of standardized commodities for the table, ready-to-wear clothing, and interchangeable spare parts for all types of machines, there has been no plan suggested for the reduction of medical diagnosis and treatment to basic units which can be ordered from traveling salesmen or acquired through correspondence courses. The physician must see his patient and see him, in many cases, over an extended period of time, if the diagnosis and treatment are to achieve the greatest possible accuracy and efficiency. There is no substitute for personal observation.

Man is not a standardized machine and each individual reacts to the conditions of life in a manner in some respects unique. In the treatment of disease, this individual variation is a factor of great significance and can receive due consideration only when the practitioner has known the patient for a considerable time and maintains a personal relation with the patient.

2. The concept of medical service of the community should include a systematic and intensive use of preventive measures in private practice and effective support of preventive measures in public health work. The cost of adequate curative treatment is now high and may continue to increase as expensive procedures resulting from scientific progress become more widely used. Sickness, in addition, involves other personal and social costs, some of which cannot be measured in monetary terms.

The outstanding achievements in scientific medicine have been made in the preventive rather than the curative field. Knowledge now available for the control of malaria, tuberculosis, smallpox, diphtheria, pellagra, typhoid fever, hookworm disease, and goiter, if effectively applied, would make unnecessary a considerable proportion of the present expense for the cure of sickness.

3. The medical service of a community should include the necessary facilities for adequate diagnosis and treatment. From the standpoint of effective diagnosis, many diseases, such as tuberculosis, cannot be recognized promptly in their early stages without the aid of elaborate technical equipment. From the standpoint of adequate therapy, if the best of modern technic is not immediately available, complete cures are either delayed or rendered impossible of attainment. To cite a specific illustration of the improvement of modern therapeutic procedures over those of ten years ago, the time required for treatment of fractures of the hip, and the percentage of permanent invalidity resulting from that injury have each been reduced by more than half.

We cannot be content with anything except the best possible service that modern science can provide and it is therefore imperative that modern scientific equipment for the diagnosis and treatment of disease be available to the practitioners of medicine in every community.

A Committee of Private Practitioners, who are also members of the Committee on the Costs of Medical Care, was appointed at a meeting of the Committee held in Washington on May 2, 1930.

Among other things, this Committee discussed the relation of private practitioners to the work of the Committee. It was the opinion of the physicians present that many members of the profession have a somewhat uncertain idea regarding the General Committee's work. The following brief statement of the aim and scope of the Committee, has been prepared by the

Committee for the information of the profession:

At the spring meeting of the Committee on the Cost of Medical Care in Washington, May 2 and 3, 1930, a special committee of private practitioners was appointed to consider the relation of the committee to the private practitioners of the country. This committee, composed of the undersigned members, now submits the following statement for the information of these practitioners on the scope and aim of the committee's work.

It was clearly recognized by all present at the spring meeting that the committee has undertaken a program of studies which in its scope goes far beyond that part of the cost of medical care which physicians provide. The expense of several other kinds of service now looms large in the total cost of many illnesses. In addition, special emphasis was given at the meeting of the question of the adequacy of the various services available in a community. Finally, the committee adopted a statement of three fundamental principles proposed by the chairman, which should go a long way toward reassuring those who have been apprehensive regarding the nature of the committee's ultimate recommendations.

The committee is interested in far more than the physician's bill, which, in many instances, is considerably less than half the total cost of illness. Hospital care, nursing, dentistry, laboratory examinations, and medicines often involve considerable expense, as is clearly shown by several of the committee's studies which are now being completed or have already been reported upon. In one middlewestern county recently surveyed, the expenditures for various kinds of medicines constituted over one-third of the total expense for medical care, and were 20 per cent greater than the costs of physicians' services. It is also becoming apparent that a great deal of money is being spent for useless medicines and for various irregular forms of treatment which do the patient no good or which may result in positive harm.

To indicate clearly the broad scope of the committee's work, it was decided at the spring meeting to make a slight change in its name. The word "cost" is to be changed to "costs." The complete name of the committee, with subtitle, will henceforth be "The Committee on the Costs of Medical Care—Organized to Study the Economic Aspects of the Prevention and the Care of Sickness, including the Adequacy, Availability and Compensation of the Persons and Agencies Concerned."

One vital problem before this committee, declared a prominent physician member, at the recent meeting, is the determination of what is reasonably adequate care. In many cases of obscure disorders and serious illness, expensive facilities are essential. Presumably, there must be available in the community well trained general practitioners, certain specialists, dentists, nurses, hospitals and health agencies,—trained and well equipped to do their part in providing all the care that the individual may need. A plan of the executive committee, to conduct a study to determine standards of adequate medical care, under the general direction of some well-known competent physician and with the assistance of a committee of fifteen or twenty other physicians, was heartily endorsed at the meeting of the general committee.

The aim of the committee is to study the problem described by Dr. Olin West, the Secretary of the American Medical Association, as the one great outstanding problem before the medical profession today. This he says is that involved in "the delivery of adequate, scientific medical care to all the people, rich and poor, at a cost which can be reasonably met by them in their respective stations in life." The committee is endeavoring to establish a foundation of facts which have an important bearing upon this problem. On the basis of these facts, it will propose recommendations for the provision of adequate and efficient therapeutic and preventive service for all the people at a reasonable cost to the individual, which, at the same time, will provide physicians, dentists, nurses, hospitals and other agents assurance of adequate return. This is not a new statement of aim. Recent discussion, however, has given new emphasis to certain aspects of it. There are important items in the cost of sickness other than the physician's bill; and the adequacy of the service provided must be considered. The program of studies is a comprehensive one. It deals with questions of supply, demand, distribution and costs of all kinds of services, both preventive and curative; the relation of these costs to other expenses; the return accruing to the practitioners and various agents furnishing medical services; and especially will it seek to determine what standards of adequacy may reasonably be expected.

Dr. Ray Lyman Wilbur, chairman of the committee, proposed at the meeting May 2, a statement of three fundamental principles for the consideration of the committee. This statement was referred to each of four subcommittees which held sessions during the two-day meeting. The entire committee, at its last session, May 3, adopted with a few verbal changes the three principles. These will be of special interest to the physicians and dentists. They follow:

1. *The personal relation between physician and patient must be preserved in any effective system of medical service.*

Medical service is and doubtless, by its very nature, must remain a distinctly personal service. The physician must see his patient and see him, in many cases, over an extended period of time if the diagnosis and treatment are to achieve the greatest possible accuracy and efficiency. There is no substitute for personal observation.

Man is not a standardized machine and each individual reacts to the conditions of life in a manner in some respects unique. In the treatment of disease, this individual variation is a factor of great significance and can receive due consideration only when the practitioner has known the patient for a considerable time and maintains a personal relation with the patient.

2. *The concept of medical service of the community should include a systematic and intensive use of preventive measures in private practice and effective support of preventive measures in public health work.*

The cost of adequate curative treatment is now high and may continue to increase as expensive procedures resulting from scientific progress become more widely used. Sickness, in addition, involves other personal and social costs, some of which cannot be measured in monetary terms.

The outstanding achievements in scientific medicine have been made in the preventive rather than the curative field. Knowledge now available for the control of malaria, tuberculosis, smallpox, diphtheria, pellagra, typhoid fever, hookworm disease, and goiter, if effectively applied would make unnecessary a considerable proportion of the present expense for the cure of sickness.

3. *The medical service of a community should include the necessary facilities for adequate diagnosis and treatment.*

From the standpoint of effective diagnosis many diseases, such as tuberculosis, cannot be recognized promptly in their early stages without the aid of elaborate technical equipment. From the standpoint of adequate therapy, if the best of modern technic is not immediately available, complete cures are either delayed or rendered impossible of attainment. To cite a specific illustration of the improvement of modern therapeutic procedures over those of ten years ago, the time required for treatment of fractures of the hip, and the percentage of permanent invalidity resulting from that injury have each been reduced by more than half.

We cannot be content with anything except the best possible service that modern science can provide and it is therefore imperative that modern scientific equipment for the diagnosis and treatment of disease be available to the practitioners of medicine in every community.

Special Committee of Private Practitioners: Stewart R. Roberts, M.D., Chairman; Walter P. Bowers, M.D.; A. C. Christie, M.D.; Haven Emerson, M.D.; George E. Follansbee, M.D.; M. L. Harris, M.D.; J. Shelton Horsley, M.D.; Kirby S. Howlett, M.D.; Arthur C. Morgan, M.D.; Herbert E. Phillips, D.D.S.; C. E. Rudolph, D.D.S.; Richard M. Smith, M.D.; N. B. Van Etten, M.D.

JOTS AND TITTLES

Science and Research

The Agricultural Experiment Station of Purdue University has reported that vitamin A is present in corn which has kernels that are yellow all the way through. The fact that yellow corn contains more vitamin A than white corn was observed by Dr. H. Steenbock of the University of Wisconsin, but not until this report from Purdue University was it known if the yellowness associated with the vitamin was present in the outer coat or in some other part of the seed. Now it is proved that it is the yellowness of the starchy storage tissue called endosperm, and not the yellowness of the outer coat of the grain, that indicates the presence of vitamin A. Vitamin A is the one which prevents the eye disease known as xerophthalmia and is also necessary for growth. It occurs rather abundantly in green leaves, certain roots, butter, and egg yolk. In edible plant tissue it seems to be usually associated with yellow color. Thus yellow carrots contain more than white, yellow turnips than white, and so on, as far as tests have been made.

Dr. J. B. Collip, of McGill University, recently told the Royal Society of Canada of his researches on the female hormone, of a powerful chemical substance that causes precocious maturity in young, immature, and virgin animals. This hormone is obtained from the placenta of animals, a portion of the reproductive system. Dr. Collip gave credit to a Japanese scientist, Hirose, who was the first to find an indication of the presence of this essential sex substance. Dr. W. P. Weisner, of Edinburgh, also undertook the problem and it was on his work as a foundation that Dr. Collip started investigations. From tests on rats and mice, Dr. Collip has discovered that this hormone is involved in the maintenance of pregnancy and he has been led to suggest that the placenta is a ductless gland of pregnancy. These new researches of Dr. Collip and the researches on sex by other scientists of other nations demonstrate that the problem of sex is much more complex than previously realized. These investigations have progressed so far that the placental hormone has been called "Emmenin." At the present time, however, it is not available for general medical use. It is being tested experimentally upon human patients in ten clinics in the United States and in Canada. Emmenin has no effect on senile animals, so that it offers no hope of rejuvenation. Neither does it have any effect on male animals which have hormones peculiar to their own sex.

Because the U. S. Bureau of Mines has just reported that the queer little Japanese waltzing mice are very sensitive to the effects of carbon monoxid, they may replace canaries which have been used as detectors for this highly fatal gas that has neither color nor odor. The difference between the time that man will be overcome and the time when a small animal will be overcome, gives a man sufficient time to reach fresh air, put on a mask, or protect himself in some other way. Occasional specimens of canaries have been tolerant enough to fail to exhibit symptoms in sufficient time to warn the person of the carbon monoxid. The effects of this gas are increased by physical activity, and the waltzing mice, almost in continuous as well as violent motion, show the effects much more quickly than any other animals.

Drs. Edmond R. Long and Arthur J. Vorwald of Chicago, have reported to the National Tuberculosis Association their pioneer attempts to stunt the growth of the tuberculosis germ in the body by decreasing the supply of glycerin. The human type of tuberculosis germs requires glycerin to promote its growth when these germs are raised outside the body on artificial culture media. These investigators found that if the amount of glycerin in the body of animals infected with tuberculosis germs was increased, the amount of growth of the germs was increased. Likewise, decreasing the amount of glycerin apparently decreased the number of germs and the extent of the disease. These investigators are not certain if the apparent reduction was actually the result of removal of free glycerin from the body. Drs. E. O. Locbel, E. Schorr, and H. B. Richardson, of New York, after studying the amounts of oxygen and food the germs needed in order to live and reproduce, believe that the tubercles formed by the body around the invading germs are to hold them in check by starving and suffocating them.

Dr. M. I. Smith, of the U. S. Hygienic Laboratory, has devised a new method of standardizing ergot. The new method is a chemical, colorimetric one, requires less experience, time, trouble, and is more accurate than the physiologic method which is given as the standard by the present U. S. Pharmacopœia. Of 40 samples of fluid extract of ergot examined by this new method (10 were commercial extracts ready for the market), it was found that these varied as much as 500 per cent in potency. The dose given is for ergot of a standard strength, but the physician has to rely on the label. It is believed that this new method will enable manufacturers to standardize ergot and, thus, may be the means of saving many lives of mothers and babies.

Annual Diphtheria Prevention in Philadelphia

Mayor Mackey in a special proclamation asked Philadelphia parents to coöperate with the Department of Public Health in its third annual attempt to eradicate diphtheria by administering toxin-antitoxin treatment

free of charge. The Mayor urged that all children of school age and under, who have not had the treatment, be taken to the nearest station for administration of the toxin-antitoxin. He pointed out that the department's administration of the treatments has reduced the diphtheria rate from 3887 to 969 cases. In this period the department has given the diphtheria protection to 364,000 school children. Last year 30,000 babies and children too young to go to school were given the free treatment. "Every year brings us many newborn babies," the proclamation read in part. "They should be given the protective treatment as soon as possible after they are six months old, because diphtheria is most dangerous when it occurs in little children. Therefore, I call upon the citizens to coöperate in this life-saving and health-protection movement, and urge mothers, fathers, and guardians of children under school age to take them to schools or to health centers in the city, where treatment will be given free of charge. Ask any school teacher or policeman for the location of the nearest place to which you can take your child to be protected from diphtheria, between the dates of June 2 and June 20."

(While we are in hearty accord with the laudable purpose of this proclamation, we are opposed to the general principle of the administration of these prevention injections free of charge. There should be a check-up at these various centers, and those who are able to pay should be refused attention, and referred to their attending physician.—*Editor.)*

One Oyster Cracker or One-half Salted Peanut

Dr. Francis G. Benedict, director of the Boston nutrition laboratory of the Carnegie Institution, told the National Academy of Sciences at the opening of its annual meeting in Washington, D. C., April 28, that one oyster cracker or one-half of a salted peanut has been found food enough to provide the extra calories needed for an hour of intense mental effort. The professor absorbed in intense mental effort for one hour had no greater extra demand for food during the entire time than the maid who dusts off his desk for five minutes. From the standpoint of dynamics, it is perhaps surprising that the extra caloric demands of mental efforts are so small.

Discussing experiments conducted by him and his wife as to the energy requirements of intense mental efforts, Dr. Benedict explained that five men and one woman were measured under three different conditions. The first measurement was taken during complete muscular and digestive repose, and as nearly as possible in a state of mental vacuity. The second was made during "attention" or repose to an electric signal, but with no active brain processes of a complex nature. The third measurement came during intense, sustained mental activity, as in the elaboration of arithmetic problems for an hour, when each subject admitted that he was mentally exhausted. The general picture of the effect of mental effort was the same with all subjects, Dr. Benedict said. There were distinct heart increase rate, pronounced alteration in the general character of respiration, a small increase in carbonic acid exhalation, and a slightly smaller increase in the oxygen consumption. In periods of repose following the mental work, the speaker pointed out that all these factors immediately resumed their former level and nature.—*Philadelphia Public Ledger.*

Without Practicing Physician

With the passing of Dr. Ambrose H. Stubbs, of Fulton Township, seven townships of the lower end of Lancaster County are without a practicing physician in their midst—a region that has supported as many as six in all ages and is now dependent upon the boroughs of Oxford, Quarryville, and Rising Sun for medical assistance.

Dr. Stubbs was not an old man, but he was of the old school of county physicians, now a vanishing type. His father had been a physician in the Lower End, but died at the early age of 52 years.

The son had practiced medicine for forty years. He was not only a prominent physician, but was well known as a citizen throughout this and neighboring counties. He owned several farms, took an active interest in community affairs, was a local leader in Republican politics, served a term as clerk of the courts, and was ever foremost in public affairs. He was especially active during the World War, in Red Cross labors and the sale of Liberty Bonds.

Active as a practitioner before the era of good roads, automobiles, modern appliances and conveniences, he labored indefatigably and wrought a noble work, in ministering to the sick and afflicted and he covered a wide area of territory.

The occasion of his funeral brought to Little Britain Presbyterian Church, of which he was a member, one of the largest assemblages of people that church has ever known. The ceremonies were impressive and unique in that the deceased had perfected every plan for his funeral and his wishes were faithfully executed. He set the hour, high noon, and directed lunch be served in the church dining room to all present. He named his pall-bearers, selected his two favorite hymns, and enjoined the minister to be brief in his remarks and noneulogistic.

The last nine lines of "Thanatopsis" expressed his ideas of a last farewell and he would have the minister deliver them. And thus it was that Dr. Ambrose H. Stubbs faded from the picture while his memory is enshrined in the hearts of countless numbers to whom he had devotedly ministered.—*Philadelphia Inquirer.*

PHYSICAL THERAPY

The High Frequency Currents in the Production of Therapeutic Fever

For many years, physicians, realizing that fever is a valuable defense against infections, have been striving to devise an ideal method for the artificial production of fever. It has been pointed out that the possible reason for the prolonged course of chronic infections is due to the lack of a strong febrile reaction on the part of the patient. It has been found that in paresis good results may be obtained by giving the patient malaria, since the fever caused by the malaria acts as a curative measure for paresis. The malarial treatment of paresis has, therefore, been extensively practiced in the past few years. In a similar manner, physicians have been injecting foreign proteins to cause a febrile reaction in chronic infections. These measures, however, have not been ideal. In some cases, malaria may not cause the desired fever, or, on the other hand, it may get beyond the control of the physician who administered it, and cause death or irreparable damage to body structures. Foreign proteins, though not so dangerous, may do similar damage.

King and Cocke have noted the dangers of such therapeusis, and they have been using diathermy for raising general body temperature. Diathermy can be administered by applying very large, especially-constructed electrodes, to the anterior and posterior sur-

faces of the body, and then wrapping the patient in rubber sheeting and several blankets to prevent heat dissemination. The electrodes are then connected to the d'Arsonval circuit of a high frequency machine and the current is slowly increased until about 3500 milliamperes is obtained. In the course of about two hours, the temperature may be raised about six degrees above normal, and it is usually maintained at this point for about three more hours. The temperature, pulse and respiration are carefully checked during the treatment. The fever can be very accurately controlled, and it may be stopped at any time. King and Cocke have reported very good results with this method of treating paresis. There are practically none of the attendant dangers which are observed with other methods for the production of therapeutic fever.

More recently, there has been discovered a short radio wave, which oscillates about ten million times per second, which will cause a rise in body temperature without there being any actual contact by means of electrodes. This machine is still only in the experimental stage, but it gives promise of revolutionizing diathermy practice. The writer recently made a visit to Schenectady to see one of these short-wave radio oscillators in operation. A patient was placed between two large plates connected with the apparatus, but not in contact with any part of it. The body temperature was gradually raised to 104° F. without difficulty. The writer placed his hand and then his knee between the plates, but with several inches of air space intervening between the plates and his hand, or knee, and he experienced the same sensation that is felt with ordinary diathermy.

These methods of treatment, however, can be used only after they have been carefully tested experimentally. King and Cocke have done sufficient work with straight diathermy to warrant serious consideration and further study of this method by other investigators. Those who are interested are referred to their article in *The Southern Medical Journal* for March, 1930.

The short-wave radio oscillator is still in the experimental stage, and it will probably be some time before it is available for general use. It seems, however, that the high-frequency currents are about to supply us with an ideal method of producing therapeutic fever.

We reiterate the statement we have made in previous editorials: we have only scratched the surface, in so far as physical therapeutic measures are concerned.

Resident Services in Physical Therapy

The department of physical therapy in the Columbia-Presbyterian Medical Center announces a series of three-month resident services in physical therapy for graduates in medicine, preferably for those with some training who wish to reside in the hospital and work on the inpatient and outpatient services. The cost of this course will be $100 a month, and room, board, and laundry will be provided. Lectures are given to the medical students weekly and opportunity for any special line of clinical research is available. During the year 1929, the service at the medical center had 3697 new admissions, with a total of 41,497 visits and 113,985 treatments. The outpatient department covers a floor space of almost 9000 square feet. Applications for three-month appointments, which will be vacant each three months beginning April 1, should be made by letter, giving full information as to training, experience in general and special medicine, and experience in physical therapy. A personal history should also be given, telling the applicant's religion, age, and other general points of information, as well as medical and premedical training. Applications should be forwarded to the director, Dr. Norman E. Titus, 622 West One Hundred and Sixty-eighth Street, New York.—*J. Assoc. Am. Med. Coll.*

The Sale of Ultraviolet Lamps to the Public

The Council on Physical Therapy has taken the stand that an ultraviolet lamp sold directly to the public should be so constructed that the radiant energy emitted shall not differ essentially from sunlight. Furthermore, the advertising and descriptive matter pertaining to such lamp should contain no curative claims nor mention of specific diseases.

In general, the Council believes that more conservative claims for the necessity of strong sunlight should be made by the manufacturers of ultraviolet generators for home use, such statements being restricted to those which can be justified by conclusive scientific evidence. The Council is not convinced that human beings in normal health require the great amount of ultraviolet energy one is led to believe from the advertising and descriptive matter pertaining to some of the so-called sun-lamps sold to the public.

A number of the more responsible manufacturers have fully agreed with the opinion of the Council. The emission characteristics of their lamps are in essential agreement with the requirements established by the Council, and in their advertisements they carefully avoid making curative claims for ultraviolet generators. Furthermore, in these advertisements attention is called to the advisability of consulting one's physician before exposing oneself to ultraviolet radiation. The Council in this way is endeavoring to guide the sale and use of sunlamps along rational channels.—*J. A. M. A.*

Changes in Erythrocytes Caused by Heliotherapy

Lapteva-Popova made a study of twenty-five persons, four of whom were well and the remainder of whom had tuberculosis of the bones. From her observation she concludes that heliotherapy increases the number of erythrocytes and reticulocytes, and decreases the amount of hemoglobin. The increase of erythrocytes continues, but after a period of rest the hemoglobin content increases. The author asserts that heliotherapy has a beneficial action on the entire organism.—*J. A. M. A.*

HOSPITAL ACTIVITIES

The Patient's Record—*Continued*

The blank used for the *laboratory record* should provide for urinalysis, phthalein test, sputum, gastric analysis, bile, feces, blood, spinal fluid, and bacteriological.

The laboratory is not used to the extent it should be. Laboratory procedure is a valuable aid never to be neglected.

Many are prone to adopt routine laboratory procedures applicable to ward patients only, which is ridiculous, as all patients (private as well as ward), should have required routine procedures.

A differential blood count, including hemoglobin estimate, should be routine with all patients on admission.

Every hospital should be prepared to make emergency urinalyses and blood counts during any period the hospital laboratory is closed, day or night. These emergencies are usually assigned to an intern, who may do satisfactory urinalyses, but too frequently unsatisfactory differential blood counts.

The laboratory should be equipped to meet the demands of any reasonable requests, and by properly manifested interest, should encourage the staff to make more frequent use of the laboratory service.

Oldest U. S. Hospital.—The New York Hospital can boast of being the oldest hospital in the United States. It is still operating on the charter granted by King George III of England in 1771. Besides its age, it may also boast of its charity. During 1928, about 45 per cent of its ward service was given free to needy patients, and about 40 per cent of the outpatient services were given without charge.

New Hospital at Fort Meade.—Colonel F. M. Hartsock, Medical Corps, surgeon of the Third Corps area, has announced that there is a new hospital at Fort Meade. The building has just been completed, in time for the summer training activities, at a cost of $243,233. It is of the colonial type and harmonizes with the type of new construction at Fort Meade. Reinforced cement with pressed-brick facing has been employed in the structure. The hospital has accommodations for 100 patients. It is subdivided into 4 wards. There are 3 private rooms, an operating rooms, and x-ray and pathologic laboratory, a dental department, and a dormitory for the attendants. Medical service will be rendered by 4 doctors, 1 dentist, 4 registered nurses, and 39 enlisted attendants, all members of the Army Medical Department.

Hospital Charities in New Jersey.—According to a report by the commissioner of state institutions, William J. Ellis, more than 40 per cent of the current maintenance expenditures by the general hospitals of New Jersey last year were devoted to charity work. About $6,250,000 was the amount expended for free service to charity patients by the 72 general hospitals in New Jersey.

First Hospital Lunch.—Benjamin Franklin not only munched a loaf of bread on the streets of Philadelphia—he started a munching custom at the Pennsylvania Hospital that has continued to the present day. Franklin, always interested in the welfare of the institution, was told that the young doctors were getting scarcely enough to eat. He immediately visited a near-by store and brought back a huge bag of ginger cookies. From that day to this a large supply of ginger cookies has been kept on hand for interns to munch between meals. They are kept in tin boxes in the interns' quarters.

INDUSTRIAL MEDICINE

First Aid Service.—To assist in the establishment of first aid service in industrial plants employing less than 500 persons, the Metropolitan Life Insurance Company has just released a booklet entitled, *First Aid Service in Small Industrial Plants.* This publication is one of a series, issued by the industrial hygiene service of the Bureau, dealing with the health of industrial and commercial workers. The report, which is illustrated by photographs of first aid rooms maintained by several industrial concerns, discusses the importance of instituting sound measures to insure the prompt and efficient care of small or minor injuries. The construction and equipment of a first aid room, as well as the personnel necessary to staff it, are described in some detail.

More Pay for Injured Virginia Workers.—Compensation paid to persons injured in industry in Virginia is the lowest paid by any of the 44 states having compensation statutes. With the increases provided in the amendments to Virginia's law, effective July 1, the maximum weekly awards permitted in Virginia place this state in a group of six states in which the weekly maximum is still the lowest paid by all the states. The state federation of labor has requested an investigation of the rates. Governor John Garland Pollard has appointed a commission to investigate this increase in rate.

Pneumonia Causes Death of Worker.—The Workmen's Compensation Act of Connecticut has recently held that death caused by pneumonia is not compensable. The worker had lost only two or three days' time during his last five years' employment with the State Highway Department. On the day he was taken ill he showed nothing abnormal or unusual in his condition and was engaged in shoveling sand from the truck onto the road. In the afternoon he was obviously ill. The next morning a physician found a beginning of pneumonia, which progressed and caused death a week later. His wife, the claimant, contended that the pneumonia was caused by the exposure to which the deceased was subjected the last day he worked. The court ruled that pneumonia was not a contemporaneous result of the exposure, and the deceased had suffered no personal injury which arose from the employment unless causually traceable to the employment other than through weakened resistance or lowered vitality.

Workman Should Accept Doctor Offered.—The North Carolina Industrial Commission has held that the services of a duly licensed physician, who is a member of the American College of Surgeons and has specialized in industrial surgery, offered to an injured workman by his employer must be accepted upon penalty of forfeiture of compensation payments. The claimant had contended that he should be allowed to select his own medical and surgical attendant.

Injury by Fellow Employee Held to be Compensable.—The North Carolina Workmen's Compensation Act recognizes an injury caused by a shotgun wound as compensable. The accident arose out of and in the course of the employment. The claimant had a colored helper, and after an altercation in which the claimant struck the helper with a shovel, the helper stopped work, collected his wages, and returning soon with a gun, shot the plaintiff.

MEDICOLEGAL AND LEGISLATIVE NOTES

New York State Legislation.—The Medical Society of the State of New York, through its Legislative Bureau has issued the following report, in regard to legislation in which the Society was interested:

The two Esmond chiropratic bills never came out of Rules Committee. The Porter-Brown chiropractic bill was reported in the Assembly and failed of passage. Every county society committee was urged to unite with the local committee on Public Relations for the purpose of developing interest among the lay folk against chiropratic. This is really a very serious matter; the legislators are endeavoring to do the right thing and they must be commended for that, but they have had many more requests from lay people for recognition of the chiropractors than they have had petitions opposing the measure from lay folk. We cannot lose patience with the legislator when he says that opposition on the part of the lay people is more to be considered than opposition from the medical profession, because our op-

position cannot help but be considered, to a certain degree at least, as selfishness.

The optometry bills were both lost in the Assembly.

The osteopathic bill was reported as having been lost in the Assembly without a slow roll call. Although the osteopaths were exceedingly active and thousands of letters from patients came to the legislature asking reconsideration of the bill, no attempt was made to bring it out a second time.

The bill authorizing free choice of physician by an injured workman, was never reported out by the Committee on Labor and Industries. If this bill is to succeed, it seems to us essential that Federated Labor make a more definite effort to support it than was made this year.

The following bills were signed by the Governor: Assembly Int. No. 212-Bernhardt (Senate Int. No. 930-Hickey), provides for adequate medical and nursing care of a woman confined in a public home and about to give birth to a child.

Assembly Int. No. 400-Rice (Senate Int. No. 256-Webb), provides applicant for admission to examination for medical license must have completed not less than four satisfactory courses of at least eight months each in a medical school, instead of studying not less than four school years, etc.

Assembly Int. No. 424-Cornaire (Senate Int. No. 341-Gates), adds to occupational diseases for which compensation may be had, radium poisoning or disability, disability from blisters or abrasions, from bursitis or synovitis and for dermatitis or venenata.

Assembly Int. No. 494-Doyle, requires those procuring donors of blood for transfusion to be licensed by local health officer on payment of $5.00 fee.

Assembly Int. No. 1567-McGrath, provides state aid to all counties engaged in public health work.

Assembly Int. No. 2083-C. P. Miller (Senate Int. No. 1776-Gates), provides in case of permanent total disability caused by loss of both eyes, minimum compensation shall not be less than $15.00 a week.

"Martyr to Science" Sues.—Trial was begun in the Supreme Court of New York April 28, of a suit brought by Mrs. Mae L. Breaton against the executors of the estate of Dr. Eldon C. Dewitt, manufacturer of patent medicine, who left a fortune estimated at $50,000,000. Mrs. Breaton charged she submitted to inoculation with a disease in an experiment to discover a remedy and Dewitt promised to pay her $1000 a month for life after he admitted he could not cure her. The executors rejected her claim for $500,000. She offered an insurance company estimate that she had a life expectancy of twenty-five years making her claim total at least $300,000.

Physician not Employee of Railroad.—According to the Federal Employers' Liability Act, a physician that is employed by a railroad company is not an officer or agent of the company, and the word "employee" is used in the statute to designate one whose work is under the order and control of the company, not one who exercises his own judgment free from supervision and the control of the company, as a physician does.

Award for Injured Dancer.—Miss Evelyn Ellsmore, a Providence, R. I., dancer, on May 6 was awarded a $75,000 verdict by a jury in United States District Court in her $250,000 suit against the Erlanger Tremont Theatre Corporation. The young woman suffered a fractured neck when she tripped over a stage mechanism while appearing in a local theater. Since the injury, it has been necessary for her to wear neck braces.

Nationality Award.—Mrs. Winifred Steele was awarded damages of $8500 in New York, May 20, in her suit against the Cunard Steamship Company for $150,000. She charged that she was denied passage on the liner Ansonia in 1927, when she was hurrying to the United States so that her baby might be born here. Mrs. Steele, an American citizen but wife of a Briton, said she wanted her baby born in the United States so there would be no question of its nationality. When she boarded the ship at Cherbourg, she declared, the surgeon declined to accept her as a passenger because she was an expectant mother. The baby was born a month later in London.

PUBLIC HEALTH

Cured Lepers.—Dr. Oswald E. Denney, of the National Leper Home, Carville, La., recently reported that 65 former lepers have been released as cured. To be certain that there is no recurrence of the disease, these individuals are watched carefully, and so far it has been necessary for only two to return. The cure is not effected by any single drug, but rather by strict sanitation and care of the general health. The average period of treatment for the cured patients was seven years. This report helps to refute the popular idea that leprosy is incurable.

Care of Baby Teeth.—According to the U. S. Public Health Service, nearly every contagious disease—all the so-called children's diseases—gain their entrance to the body either through the mouth or nasal cavity. If the child's mouth is healthy, if his teeth are sound, his gums firm and hard, many of these disease-causing organisms cannot find lodgment. A child should be taken to the dentist by all means by the time he is three years old, and at least every six months thereafter. The temporary teeth should be cleansed by the dentist at least twice a year, and all cavities filled as soon as they appear. The child should look upon the dentist as his friend instead of some one to fear. The first permanent molar, or six-year molar, is the most vital tooth in the mouth. The permanent teeth are built of the same elements of which the temporary teeth are formed. Bone and tooth building elements are contained in most leafy vegetables, milk, butter, eggs, whole-wheat bread, coarse cereals, and fruit; but sunshine, open air play, fresh air at night, and clean personal habits are also essential to good health.

Antituberculosis Inoculation of Infants.—The method, developed by Drs. A. Calmette and C. Guérin, of the Pasteur Institute, Paris, of inoculating new-born infants with a half-starved strain of tuberculosis germs from cattle has recently resulted in a number of deaths in a German baby asylum. The germs are supposed to have lost their disease-producing power but to be able to produce immunity. American physicians have not as a rule adopted the method as have the Continental doctors. Prof. C. E. A. Winslow, of the Yale School of Public Health, has advised that the method be given a thorough trial of animal experimentation in this country. Dr. M. H. Soule, of the hygienic laboratory of the University of Michigan, was more enthusiastic about the method after he had visited Dr. Calmette's Clinic in Paris. Dr. S. A. Petroff of the Trudeau Sanatorium, N. Y., and Dr. Ralph Mellon, of the Western Pennsylvania Hospital, Pittsburgh, have warned against the method.

Typhoid Fever.—The American Medical Association has reported that during 1929, in 5 of 81 cities

of the United States, having a population of over 100,000, there was no death from typhoid fever. The five cities are: Duluth, Minn.; Hartford, Conn.; New Bedford, Mass.; Reading, Pa.; and Spokane, Wash. Typhoid, the vacation disease, is spread largely through contaminated water, milk, or food. Telegraphic reports to the United States Public Health Service show an increase in the number of cases of typhoid fever throughout the country during the past few weeks. For the entire country, 260 cases were reported for the week of May 18, sufficient cases to make health officers renew their efforts and warnings at this season.

Concerning Cancer.—Speaking at the closing session of the American Surgical Association, Dr. Joseph Colt Bloodgood, of Johns Hopkins Hospital, appealed to the surgeons of this country and Europe to "pool" their findings on cancer and possible steps to be taken to check the disease. He emphasized the urgent need of securing information of surgeons, pathologists and radio therapeutists in order to impress upon individuals the necessity of early treatment to obtain a cure.

Dr. George H. Bigelow, commissioner of health of Massachusetts, has reported the death rate from cancer apparently has increased more than 50 per cent during the last 20 years. This is the greatest increase of any state in the Union.

Dr. Chevalier Jackson, inventor of the bronchoscope, declared that treatment of pulmonary diseases, principally cancer and tumors, with radon seeds was meeting with success. The seeds are extracted from radium and scattered on the affected areas by means of the bronchoscope. These seeds emanate radium rays, conducive to relief of the condition.

Dr. Max Cutler, of New York, uses an electric light in a ray powerful enough to make flesh glow, yet cool enough to avoid burns. The internal shadows thus revealed, in some cases, whether a growth is cancer.

Self-Treatment of Goiter Disapproved.—In a statement made public, June 6, self-administration of iodin in attempts to prevent or treat endemic goiter is condemned by the U. S. Public Health Service. The cause of simple goiter is considered in detail in the text. There is, also, a critical consideration of the various prophylactic measures and their relative value. The importance of iodin prophylaxis during pregnancy has received particular attention. While suggestions are given for the appropriate treatment of endemic goiter, the self-administration of iodin, either for prophylaxis or treatment is condemned.

Morbidity in Pennsylvania in May, 1930

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Aliquippa	3	88	7	1	4
Allentown	4	13	9	2	6
Altoona	2	3	8	0	7
Ambridge	2	10	5	0	3
Beaver Falls	0	4	3	0	1
Berwick	0	0	0	0	0
Bethlehem	1	4	6	0	18
Braddock	0	3	5	0	6
Bradford	0	1	3	1	19
Bristol	0	8	4	0	2
Butler	1	4	2	0	22
Canonsburg	0	2	2	0	0
Carbondale	1	0	0	0	0
Carlisle	0	0	0	0	0
Carnegie	1	2	2	0	2
Chambersburg	0	0	0	0	1
Charleroi	0	7	1	0	0
Chester	4	6	10	0	2
Coatesville	6	1	0	0	4
Columbia	0	4	0	0	0
Connellsville	2	2	1	0	0
Dickson City	1	0	0	0	1
Donora	0	19	0	0	0
Dubois	0	2	0	0	0
Dunmore	0	0	2	0	0
Duquesne	3	10	9	0	0
Easton	4	5	8	0	3
Erie	6	15	6	0	33
Farrell	0	0	0	0	0
Greensburg	0	7	1	0	1
Harrisburg	0	6	5	0	13
Hazleton	25	23	3	0	3
Homestead	1	11	2	0	0
Jeannette	0	4	0	1	0
Johnstown	5	1	8	0	24
Lancaster	7	7	0	0	5
Lebanon	2	6	0	1	0
McKeesport	3	3	7	0	2
McKees Rocks	0	4	0	0	2
Mahanoy City	0	0	0	0	0
Meadville	0	19	6	0	1
Monessen	15	4	1	0	0
Mount Carmel	0	0	0	0	0
Nanticoke	0	5	1	1	0
New Castle	1	26	1	0	1
New Kensington	0	14	0	0	0
Norristown	0	119	1	0	7
North Braddock	2	3	0	0	1
Oil City	0	2	0	0	19
Old Forge	0	1	0	0	0
Olyphant	2	0	1	0	0
Philadelphia	73	1558	677	2	89
Phoenixville	0	16	9	0	0
Pittsburgh	131	1571	163	5	182
Pittston	1	0	0	0	0
Plymouth	1	0	2	0	0
Pottstown	0	0	7	0	0
Pottsville	1	0	0	0	0
Punxsutawney	0	0	3	0	0
Reading	4	10	15	0	14
Scranton	3	3	11	0	17
Shamokin	12	5	0	0	0
Sharon	0	0	5	1	0
Shenandoah	3	0	2	0	0
Steelton	0	4	1	0	0
Sunbury	0	3	0	0	0
Swissvale	0	20	10	0	7
Tamaqua	0	0	1	0	1
Uniontown	2	44	3	0	4
Warren	0	66	1	0	3
Washington	0	16	0	0	16
West Chester	0	1	0	1	4
Wilkes-Barre	4	10	41	1	4
Wilkinsburg	4	37	4	0	1
Williamsport	3	314	1	0	2
York	0	19	7	0	0
Total Urban	346	4175	1093	17	557
Total Rural	177	2440	622	37	459
Total State	523	6615	1715	54	1016

Tuberculosis Abstracts

A Review for Physicians

PREPARED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Published through the coöperation of the Pennsylvania Tuberculosis Society and the Medical Society of the State of Pennsylvania

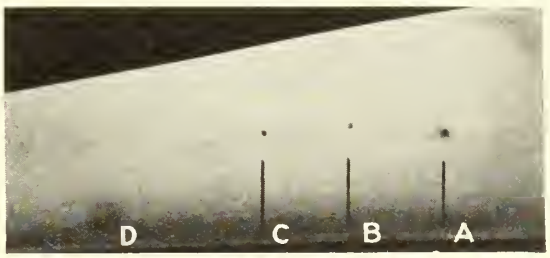
EARLY European statistics, based largely on studies of groups suspected of having tuberculosis and living in populous cities, created the impression that all adults and nearly all children reacted positively to the tuberculin test. For that reason, the value of the test was unjustly discounted. Infection is not so prevalent in this country, especially among children, and since the tuberculin reaction is a very simple measure and furnishes a base line in the diagnosis of early tuberculosis, its value is being reëstablished. Charles Hendee Smith, from whose paper, "Tuberculin Skin Reactions," the following abstracts are derived, pleads for a more consistent use of the test, and at the same time emphasizes the need for greater precision in making and interpreting the test.

Tuberculin Skin Reactions

Tissues which have once been sensitized by living tubercle bacilli develop the power to react to tuberculin. A positive tuberculin reaction means that the tubercle bacillus has lived and grown in the body. Koch introduced the general, or subcutaneous tuberculin reaction in 1890. In 1907, Pirquet developed the cutaneous scratch test, and the same year Wolff-Eisner and Calmette described the conjunctival test, while Moro gave us the percutaneous or inunction test. About a year later, Mantoux introduced the intracutaneous test, and shortly after that Hamburger and Monti used the hypodermic, or "Stich" method. The object of each of these tests is to bring tuberculin into contact with the deeper epidermal cells and, therefore, the intracutaneous and "Stich" tests may be expected to be more accurate than the Pirquet and Moro tests.

Pirquet Test Unreliable

Because of the simplicity of the technic, the Pirquet test has gained popularity and has been used in many countries as a routine procedure; but it has distinct disadvantages. If the scratch is too deep, the subsequent swelling may, to an untrained observer, resemble a positive reaction. A greater disadvantage is the uncertainty of the test because the tuberculin may not be kept in contact with the cells of the deeper layer of the skin long enough to excite the specific response. Many children fail to react on the first test, yet show a positive reaction when retested a few days later. This is not due to the raising of the sensitivity by the first test, for if two tests are made at the same time, one may fail while the other reacts sharply.



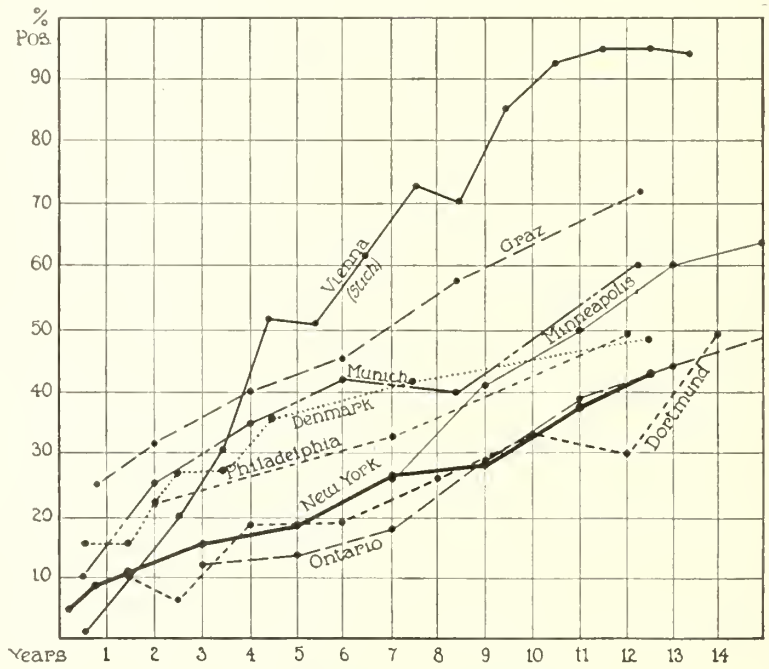
Pirquet Reactions and Control
A.—Pirquet positive; B—Control; C—Pirquet negative; D—Mantoux.

The unreliability of the Pirquet test, says Smith, became manifest to those in the Children's Medical Division at Bellevue Hospital about ten years ago. The Mantoux reaction was adopted in the hope of finding a more accurate test. Immediately, it was found that many patients reacted definitely to the Mantoux test and failed to react to the Pirquet, although two of the latter tests were always done. This difference persisted year after year and at about the same rate; i. e., the Mantoux test giving about

twice as many positive reactions as the Pirquet. For several years, both tests were performed on all children, but the Pirquet was finally dropped as a waste of time because of its uncertainty.

Careful Technic Essential

After trying various dilutions, Smith found that 1:1000 is the most satisfactory, stronger solutions (1:200, 1:100, or 1:10) being used if necessary to retest, though these stronger solutions should never be used for the first test as sloughing may result. Making up and keeping the solution is not difficult, but the usual precautions must be strictly observed and errors of technic must be guarded against. For example, a needle or syringe that has been used for tuberculin should never be used for the control nor for a Schick test, as tuberculin may remain active after boiling several hours and cause a reaction. Acute illness, especially if there is high fever, may suppress the reaction. Severe tuberculosis, such as general miliary tuberculosis or a wasting, chronic disease, may obscure the reaction. The tuberculin must not be too old nor contaminated with bacteria or molds.



Curves marked with names of cities showing incidence of positive Mantoux tests by years.

Pirquet and Mantoux Tests Compared

As a means of comparing the reliability of the Pirquet with the Mantoux test, 3112 children (ranging in age from birth to 13 years) were given two Pirquet tests at the same time that the Mantoux was given. Seven and eight-tenths per cent reacted positively to the Pirquet test, while 16.5 per cent responded to the Mantoux. This confirms the opinion of others that the Pirquet test is unreliable and that epidemiologic studies based on the Pirquet test are, for that reason, open to criticism. Smith has gathered and compared graphically the tuberculin tests results of various groups of children in American and European cities. All of these inscribe so characteristic a curve or slope that it is quite possible to calculate the incidence of positive reactors at given ages in a given place. It is interesting that the curves for Vienna and Graz are distinctly higher than for other European cities and that all the curves of American cities are of about the same incidence. Not more than 40 to 50 per cent in the large American cities harbor the bacillus at puberty.

It must be remembered, concludes Smith, that "the army of the tuberculous is recruited from those infected in childhood," and "phthisis is the last verse of a song the first of which was sung in the cradle." These infected children, then, who carry tubercle bacilli in their bronchial nodes or elsewhere, are the ones who need early, correct diagnosis. The Mantoux test provides the means of making it. It should be used on every child who is underweight, anemic or languid, or who has an unexplained irregular fever. These children with "tuberculous infection," so-called, have true incipient tuberculosis, latent or active. This disease is generally in lymphatic tissue, where it is easily encapsulated and where scar tissue does no great harm. Under intelligent, watchful care they usually do well. When the disease has involved more important structures, such as the lungs, bones, or meninges, the damage is greater, the cure is more difficult or impossible, and the diagnosis has been made too late.—*Tuberculin Skin Reactions, Charles Hendee Smith, Am. J. Dis. Child., Vol. 38, Dec., 1929*

THE MEDICAL SOCIETY
OF THE
STATE OF PENNSYLVANIA

Officers' Department

WALTER F. DONALDSON, M.D.
Secretary
8063 Jenkins Arcade Bldg.,
Pittsburgh, Pa.

CALL TO THE 1930 MEETING

The first meeting of the 1930 House of Delegates of the Medical Society of the State of Pennsylvania will be called to order in the Ballroom of the Fort Stanwix Hotel, Johnstown, on Monday, October 6, 1930, at 3 p. m.

J. B. F. WYANT, M.D.
RETIRING DISTRICT COUNCILOR*

The subject of this sketch, Dr. Jay B. F. Wyant, of Kittanning, has, we believe, served our State Society in the capacity of Trustee and Councilor for a longer continuous period of time than has any of his predecessors, and no doubt longer than will any of his successors. Dr. Wyant was first elected Trustee and Councilor for the Ninth Councilor District at the Philadelphia session of our State Society in 1915, to serve for two years. In 1917, he was reëlected for two years; and again, in 1919, for two years; in 1920, he was reëlected to serve for a full term of five years; and in 1925, in Harrisburg, he was again reëlected to serve another full term of five years, which expires in October, 1930. Since, under our present Constitution, "no Trustee shall be eligible to succeed himself after he was served two full consecutive terms," Dr. Wyant is ineligible for reëlection in 1930.

The county societies comprising the Ninth Councilor District are Armstrong, Butler, Clarion, Indiana, Jefferson, and Venango, no change having been made in the state-wide redistricting made by the House of Delegates in 1926. The following figures show the membership of these county societies in 1915 and in 1930:

Name	*Membership 1915*	*1930*
Armstrong	59	51
Butler	61	58
Clarion	31	26
Indiana	55	59
Jefferson	65	49
Venango	52	54
Total	323	297

There has been a net loss of 26 members for the District, which reflects no discredit on the activities of the Trustee and Councilor for the district, but rather furnishes added proof of the trend of recent graduates in medicine toward the cities, and the permanency of the void created by the retirement of the older rural practitioners.

Dr. Wyant has been particularly canny in his handling of threatened suits for alleged malpractice occurring in his district. By reason of prompt and vigorous personal arbitration between representatives of the plaintiff and the accused physician, Dr. Wyant has in several instances brought about abandonment of threatened legal proceedings. Only one of eight approved applications for medical defense has reached the courts in fifteen years—truly a remarkable record.

Councilor Wyant has been faithful in his "pastoral" duties to the county societies comprising his district, visiting each one periodically, conveying to them the latest advices in organizational economic and legislative policies originating in the quarterly meetings of the Board of Trustees of our State Society.

During his term of office, Dr. Wyant has attended 29 meetings of the Board of Trustees, exclusive of meetings held in connection with the annual sessions of the State Society. Of the latter meetings he has missed none, and of the interim meetings but 3—another remarkable record, it being more than a commuter's jaunt from Kittanning to Harrisburg.

The Board of Trustees have more than once shown their appreciation of the wisdom con-

* Read before the Annual Meeting of the Ninth Councilor District, Kittanning, June 3, 1930.

tributed to their deliberations by choosing Dr. Wyant as their chairman, and he has served with distinction upon various of its committees also. Dr. Wyant is one of the two last members of the Board as it existed in 1918, when the writer first became closely associated with the work of the Board, upon his election to the Secretaryship of the Society. Your Secretary shall always be grateful to Dr. Wyant for his kindly support and wise counsel, and it is our hope that he may not only live long and prosper, but that he may continue to maintain his lively interest in the work of the Society and to contribute his best efforts for the benefit of his fellow-men.

The writer has frequently expressed the opinion that the office of Trustee and Councilor in the Medical Society of the State of Pennsylvania places upon him who accepts it, perhaps, greater opportunities for service and requires more sacrifice of time and energy than any other office within the gift of the Society, and would rank Dr. J. B. F. Wyant among the choicest of those who thus serve the best purposes of our State Society.

PROPOSED AMENDMENTS TO CONSTITUTION AND BY-LAWS

Amendments to Article V of the Constitution and Chapter IV of the By-Laws have been proposed by Dr. J. Norman Henry, Philadelphia, and will be presented for action to the 1930 House of Delegates.

Paragraph 2 of Article V, if amended, will read as follows: If any component county medical society is without representation at the close of the roll call of *any* (changed from *the second*) meeting of the House of Delegates.....

Section 2 of Chapter IV will then read as follows: The election of officers shall be the first order of business of the House of Delegates after the reading of the minutes on the morning of the second day of the General Session. This order of business may be postponed to a definite time and place by a two-thirds vote of those present. The President shall appoint three members as tellers, who shall count the ballots under the supervision of the Secretary. In the election of officers of this Society, the Secretary shall call the roll of the members of the House of Delegates and each member, as his name is called, shall come forward to the President's desk and deposit his ballot.

An amendment to Section 2 of Chapter VI of the By-Laws has also been offered to include the chairman of the Scientific Exhibit Committee as a member of the Committee on Scientific Work. Section 2 of Chapter VI will then read as follows: The Committee on Scientific Work shall consist of the President, Secretary, Editor, Manager of Sessions and Exhibits, Chairman of the Committee on Arrangements, Chairmen and Secretaries of the Sections, Chairman of the Finance Committee of the Board of Trustees, Chairman of the Committee on Scientific Work appointed annually by the President, and *Chairman of the Scientific Exhibit Committee*.....

CONTRIBUTIONS TO MEDICAL BENEVOLENCE FUND

The Committee on Medical Benevolence gratefully acknowledge the following contributions to the Medical Benevolence Fund:

Woman's Auxiliary to Fayette County Medical Society	$150.00
Woman's Auxiliary to Lycoming County Medical Society	150.00
Woman's Auxiliary to Philadelphia County Medical Society	100.00
Woman's Auxiliary to Mifflin County Medical Society	25.00
Woman's Auxiliary to Greene County Medical Society	10.00

HISTORY OF WASHINGTON COUNTY MEDICAL SOCIETY

In connection with the celebration of the seventy-fifth anniversary of the organization of the Washington County Medical Society, which was held on May 23, at Washington, a very interesting Souvenir Program and History of the Society was distributed. A committee composed of six members, with Dr. J. H. Carey of Washington as Chairman, is responsible for the success of the endeavor to group the historic medical events related to the development of Washington County, beginning with the location at Catfish of Dr. Henry Moore, in 1777. The committee is evidently greatly obligated to several members of the Woman's Auxiliary to the Washington County Medical Society, contributions to the history having been made by members of the auxiliary as follows: "The Early History of Medicine in Southwestern Pennsylvania," by Mrs. J. H. Corwin; "Physicians in Southwestern Washington County," by Mrs. C. C. Cracraft; "Physicians of Western Washington County," by Mrs. D. L. McCarrell; "Physicians of Northeastern Washington County," by Mrs. J. A. Douglass; "Physicians of Southern Washington County," by Mrs. J. H. Carey; "Physicians in Amwell Township," by Mrs. G. W. Ramsey; "Pioneer Doctors of Eastern Washington County," by Mrs. A. N. Booth;

and "Pioneer Physicians of Washington," by Mrs. W. D. Teagarden.

A copy of the history has been placed in the archives of our State Society against the day when the medical history of the State of Pennsylvania will be compiled. We would that all of our component societies might emulate the example of the Washington County Society in thus recording for all time the splendid contribution of the fathers of medicine to the early development of our Commonwealth.

DEATH OF DOCTOR BENJAMIN A. THOMAS

Our Society has suffered an irreparable loss in the death on May 29 last of Dr. Benjamin A. Thomas, chairman of the Section on Urology, and until this year its secretary since the time of the creation of the Section in 1927. On account of illness Dr. Thomas was unable to attend the last meeting of the Committee. He was never before absent, and his thorough appreciation of the purposes of our State Society and his lively interest in the work of its Program Committee will long be remembered.

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to June 15:

ADAMS: *Death*—J. Hamilton Hildebrand, Biglerville (Univ. of the South '98), May 15, aged 71.

ALLEGHENY: *New Members*—Vincent P. Burby, 536 Penn Ave., Turtle Creek; Lisle K. Hazlett, 201 E. 7th St., Tarentum; Florence Fassburg, 2901 Center Ave., Julia S. Guarino, 4068 Penn Ave., William L. Marks, 5202 Woodlawn Place, John Priestes, Jenkins Arcade, Pittsburgh. *Transfers*—James A. Martin, 107 Overlook Dr., Mt. Lebanon, Pittsburgh, from Washington County Society; Nora M. Logan, Pittsburgh, from Clearfield County Society. *Deaths*—David Lipschutz, Pittsburgh (Univ. of Pgh. '18), June 6, aged 44; Max G. Schlotbom, Pittsburgh (Univ. of Pgh. '02), May 27, aged 66; William H. Wolf, Pittsburgh (Eclectic Med. Coll. '96), June 1, aged 59.

BEDFORD: *Removal*—Thomas G. McQueen from Bedford to Millheim.

CENTER: *Death*—Edwin M. Miller, Millheim (Jeff. Med. Coll. '90), April 14, aged 63.

CLEARFIELD: *Removal*—John Henry Smith from Sykesville to Odin, Ill.

DAUPHIN: *New Members*—John T. Burnite, 1734 State St., Harrisburg; William B. Kirkpatrick, Lemoyne; Ruby Lehman, Middletown. *Death*—Alfred L. Shearer, Harrisburg (N. Y. Univ. Med. Coll. '83), May 8, aged 71.

FRANKLIN: *Transfer*—Howard L. Dovey, Mercersburg (formerly of Everett), from Bedford County Society.

HUNTINGDON: *Removal*—R. Woods Croyle from Riddlesburg to Peoples Hospital, Akron, Ohio.

INDIANA: *Removal*—Ira C. Miller from Dixonville to Rossiter.

LACKAWANNA: *New Member*—Richard N. Mackey, Clarks Summit.

LANCASTER: *Deaths*—William M. Herr, Lancaster (Univ. of Pa. '85), June 10, aged 67; Ambrose H. Stubbs, Peach Bottom (Balt. Med. Coll. '96), May 11, aged 56.

LEHIGH: *New Member*—Ethel F. Buchman, Allentown State Hospital, Allentown.

LUZERNE: *Removal*—Rudolph D. Martin from Wilkes-Barre to 32 Broadway, Nanticoke.

MCKEAN: *Transfer*—Edward A. Mansuy, Bradford, from Elk County Society.

MERCER: *New Member*—Leo T. McKee, 212 Smith Ave., Sharon.

NORTHAMPTON: *New Members*—J. E. Brown, Lehigh University, Bethlehem, Milton E. Weaver, Perkasie. *Death*—Victor J. Koch, Nazareth (Univ. of Pa. '03), May 8, aged 53.

PHILADELPHIA: *New Members*—Sidney A. Brody, 3125 Robbins Ave., Percy G. Hamlin, Friends Hospital, Frkfd; Harriett MacSorley, 631 E. Mt. Airy Ave; William C. McCuskey, 37th and Walnut Sts., Edward F. McLaughlin, 4116 N. Broad St., Douglas P. Murphy, School of Med., Univ. of Pa., Ira G. Towson, Greene and Coulter Sts., Gtn., Michael G. Wohl, 1727 Pine St., Philadelphia. *Removals*—Max Messing from Philadelphia to 7624 Bay Parkway, Brooklyn, N. Y., William J. McConnell from Long Island, N. Y., to 1 Madison Ave., c/o Metropolitan Life Ins. Co., New York City. *Deaths*—Radcliffe Cheston (Univ. of Pa. '83), May 13, aged 69; Charles W. Gessler (Univ. of Pa. '67), May 2, aged 85; Charles E. Price (Jeff. Med. Coll. '00), May 14, aged 54; Joseph S. Kitchen (Jeff. Med. Coll. '06), May 15, aged 52; James C. Stirk (Hahnemann Med. Coll. '91), May 23, aged 61; Benjamin A. Thomas (Univ. of Pa. '03), May 29, aged 52.

SCHUYLKILL: *Removal*—Peter B. Mulligan from Ashland to 2609 Market St., Camp Hill.

SOMERSET: *New Member*—W. W. Westfall, Somerset.

VENANGO: *New Members*—Kelse M. Hoffman, 1051 Elk St., Franklin; Cecil H. Hodgkinson, National Bank Bldg., Oil City.

WASHINGTON: *Removal*—John A. Krosnoff from Marianna to Bentleyville.

WESTMORELAND: *Death*—Elmer N. Piper, New Kensington (Univ. of Pgh. '02), May 8, aged 64.

YORK: *New Members*—Bruce A. Grove, 803 S. George St., Harry W. Howden, 231 W. Broadway, York.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since May 16. Figures in first column indicate county society numbers; second column, State Society numbers:

1930				
May 16	Lawrence	62	7609	$ 7.50
	Philadelphia	2031-2051	7610-7630	157.50
	Fayette	123	7631	7.50
	Chester	80	7632	7.50
	Northampton	133-135	7633-7635	22.50
20	Mercer	73	7636	7.50
22	Venango	48-50	7637-7639	22.50
23	Lehigh	132	7640	7.50
24	Luzerne	291-292	7641-7642	15.00
	Cumberland	35	7643	7.50
26	McKean	38-40	7644-7646	22.50
	Wayne	29	7647	7.50
	Carbon	30	7648	7.50
28	Clarion	25-26	7649-7650	15.00
	Washington	129	7651	7.50
29	Lackawanna	231	7652	7.50
June 4	Somerset	37	7653	7.50
6	Luzerne	293	7654	7.50
	Westmoreland	166-170	7655-7659	37.50

1930				
June 11	Wayne	30	7660	$7.50
	Luzerne	294-295	7661-7662	15.00
13	Dauphin	176-178	7663-7665	22.50
	Lackawanna	232	7666	7.50
16	Philadelphia	2052-2069	7667-7684	135.00
	York	130-132	7685-7687	22.50

COMMITTEE ON SCIENTIFIC WORK

C. HOWARD MARCY, M.D., *Chairman*
Pittsburgh, Pa.

PROGRAM OF THE SECTION ON PEDIATRICS

A practical as well as interesting program has been arranged for the Section on Pediatrics to be presented in Johnstown next October during the annual meeting of the Medical Society of the State of Pennsylvania. Short and snappy papers comprise the three sessions which will be characterized by several symposia, a joint meeting with the Section on Surgery, two renowned guests, and eight interesting case reports.

Tuesday afternoon, October 7, the section opens with a free luncheon at the Memorial Hospital, as guests of that institution. This luncheon is given to all interested in pediatrics and it is expected that those attending will make their reservation upon registering. Following the luncheon there will be a clinic under the direction of Dr. W. F. Mayer, of Johnstown. The final hour of the day will be devoted to papers on sinus infection in children, goiter prevention in schools, and vulvovaginitis in children.

The first guest of the section will be Dr. William E. Ladd, of Boston, who will close the joint meeting of the Surgical and Pediatric Sections on "The Acute Surgical Abdomen in Children," with lantern demonstration. This should prove a treat as Dr. Ladd has been the chief surgeon of the Boston Children's Hospital for many years and has written and studied this subject intensely. Prior to this address both sections will conduct a symposium on osteomyelitis and empyema, one hour given to each topic.

The third session, October 9, will open with a symposium on diabetes mellitus, stressing the treatment associated with other diseases; abolishing coma and its treatment; management of the ambulant diabetic; and the proper use of diet and insulin. This is to be succeeded by an hour of case reports after which there will be another symposium on nutrition in children. This latter symposium will cover the problem of the ideal infant food, if there is such a food. An original investigation of the value of irradiated milk as a general preventive of rickets also assists in this make-up. In addition the roentgen study of bone lesion in scurvy and the management of pyloric obstruction with reference to remedial agents will be included in this discussion.

The address that nobody should miss closes the program, that of Dr. Clifford G. Grulee, who is at the head of the pediatric department of Rush Medical College, Chicago, on the subject of "Intraperitoneal Therapy in Infants and Young Children," which will include lantern demonstration. Anyone who has heard Dr. Grulee knows what a treat is in store for his listeners at this meeting.

This is just a hurried résumé of some of the items on the pediatric program. When the official program is printed in this JOURNAL, in August, peruse it carefully, then decide to be a guest of the Pediatric Section in Johnstown next October and it is certain that you will be well repaid.

COMMITTEE ON PUBLICITY

J. D. KEIPER, M.D., *Chairman*
Johnstown, Pa.

JOHNSTOWN IN OCTOBER

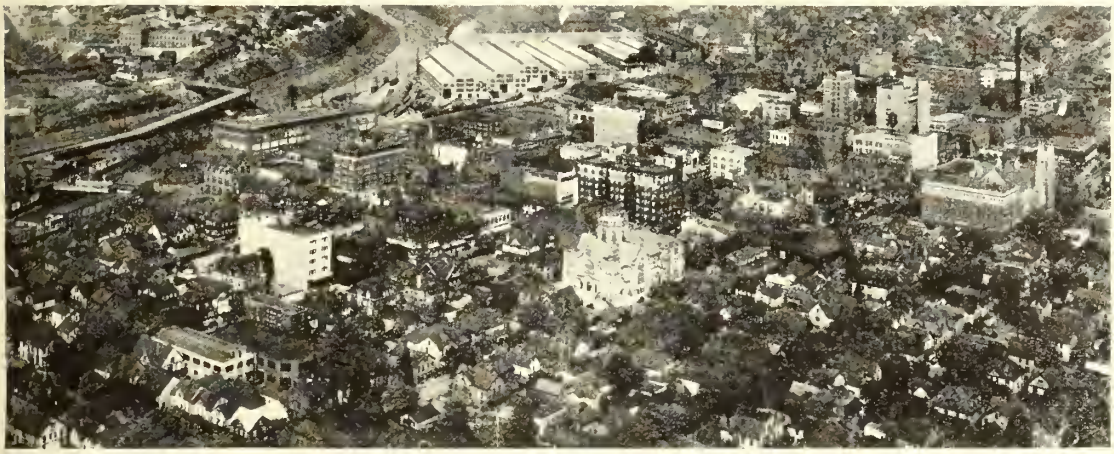
Already more than half of 1930 belongs to the past. Summer is fast passing. July is here. Surely it is now time to prepare for the meeting of the Pennsylvania Medical Society to be held at Johnstown, October 6 to 9.

The ultimate in scientific program is assured and, aside from the scientific program, this meeting is so full of other interesting features for the doctor and his lady that failure to attend will mean an irreparable loss. The autumnal coloring of the forests of the rugged mountains about Johnstown insures rare scenic beauty that cannot be described—rare scenic beauty that is nowhere surpassed. Especially do Route 56, north of Pleasantville, and Grandview Point, on the Lincoln Highway, offer resplendent visions, landscapes indescribably beautiful. Not these alone, but many others appeal to every lover of nature and the beautiful.

On the plateau above the city, the beautiful Sunnehanna Country Club affords a complete view of the mountains for many miles in every direction. This plateau, Westmont, is reached from the west by Menoher Highway; and by pavement and the Incline Plane, the most acute-grade incline plane in the world.

Completeness of arrangements and the hearty coöperation of Johnstown's Chamber of Commerce, business men, and entire citizenry, evidence that the entertainment offered the State physicians and their guests will be of such character and diversity as to leave nothing to be de-

sired, affording fullness of interest and diversion. The Woman's Auxiliary will have the use of the Elks Home and the Capitol Hotel for various activities. The scientific program and exhibits will be housed in the spacious State Theater Ballroom. The smoker will be held at the Auditorium. The President's reception is scheduled at the Sunnehanna Country Club. The Public Meeting will use the main auditorium of the new senior Central High School building. All centers of activity are within easy access from hotels and parking spaces. Restaurant service will be amply provided. The circle of organization is about completed.



Business District of Johnstown as Viewed from Top of Incline Plane

The September Journal will afford a full description of Johnstown, as well as a key map of the city, noting centers of activity and points of entry in addition to a road map for motorists.

Full arrangements for golf and trap shooting sports have been completed. The former, at the Sunnehanna Country Club; the latter, at the Geistown range, probably the most sporty trap range in the State.

County Society Reports

ALLEGHENY—MAY

Under the direction of Dr. H. G. Schleiter, chairman, the Allegheny County Heart Commission presented an interesting and instructive program at the regular scientific meeting for May.

Dr. H. T. Price explained the meaning and the aims of Child Health Week. He mentioned the value of using the newspapers and other regular means of communication for disseminating information on the importance of preventive treatment. After reviewing the work which had been done in attempts to prevent diphtheria, smallpox, etc., he emphasized the important rôle of the physician. "The physician is the keystone of all this work; without the physician the work will fail."

Mr. Frederic G. Elton, of New York, discussed in considerable detail his experiences in rehabilitation of the handicapped. He made a strong plea for more coöperation among the physicians and agencies which are attempting to solve the problems presented by the partially disabled patient. It would seem reasonable to expect that the responsibility for much of this work should be assumed by those who are practicing industrial medicine.

"The Rôle of Certain Infections in Heart Disease." Adolphus Koenig, Jr., M.D.—The etiologic factors of heart disease are usually considered under the two divisions of degeneration and infection. It seems reasonable to consider that infection in general exerts its various influences on any organ either directly or indirectly through the medium of a toxin generated at a focal point or by the direct influence of bacteria attacking the organ immediately.

The outstanding example of pure toxic action is afforded by diphtheria. Histologic study of a heart dying in such an infection helps one to appreciate the reason for the progressive signs of acute heart failure. It also excites admiration for the remarkable reserve power and the tenacity for living of the heart in the face of overwhelming toxemia and cell death. While the toxic agents may attack the conducting mechanism of the heart and the muscle fibers, thus inducing arrhythmias dependent upon various degrees of heart block, yet the almost universal end result is complete and asymptomatic recovery.

Jones and White have published a summary of the physical conditions of one hundred patients (mostly children) five to eight years after severe diphtheria. While functional murmurs and sinus arrhythmia were noted in the usual frequency, and premature beats in two cases, not one showed evidence of cardiac enlargement by physical examination nor were there other signs of heart disease demonstrable by usual methods including electrocardiographic studies.

Nevertheless there is the inescapable conviction that the hearts of some patients do suffer irreparable damage which leads to untimely death. In the occasional patient seen with signs and symptoms of cardiac insufficiency, giving a history of diphtheria or scarlet fever 10 or 20 years previously, it is manifestly impossible to prove that such infection is the basic cause of the present condition. Yet when this youthful patient has la-

tent heart block, or a grossly hyperthrophied heart, without signs of valvular disease, and a blood pressure of 220 mm. systolic, and 130 mm. diastolic, it seems at least reasonable to consider the condition the possible end result of toxic degeneration of the conducting system in the one case and of the entire cardiovascular system in the other. This is at least a more satisfactory explanation than the uninformative term, essential hypertension.

The second division in the etiology of heart disease is that of direct bacterial attack, which in turn may be considered under two general headings. The first is little more than an acute bacterial endocarditis as part of the picture in a fatal bacteremia. The other is that of the true and frequent bacterial heart disease, which may be considered under the titles of syphilitic, rheumatic, and subacute bacterial endocarditis.

No better evidence of the confusion still existing as to the etiology and manifestations of rheumatic infection could be offered than the fact that there is not even agreement as to the proper name for the condition. Current authoritative opinion, however, holds that rheumatic infection is a generalized systemic disease with many possible local manifestations, any one or several of which may be present and so constitute a clinical case. These manifestations include tonsillitis, arthritis, or more usually exudative periarthritis, chorea, erythema nodosum, and rheumatic heart disease.

Summarizing, it may be said that three etiologic groups are now recognized as responsible for the majority of infectious heart disease, per se. These are syphilis, subacute bacterial endocarditis, and rheumatic disease. Of the third, it cannot yet be said whether the causative agent is one of the many indicated, or an undiscovered virus, nor whether its effect is accomplished by direct bacterial activity on the heart, or through the medium of allergy. It is conceivable that rheumatism and bacterial endocarditis are different manifestations of the same virus assault, depending upon the stage of infection and the immune reaction of the body.

"Noncardiac Causes of Cardiac Symptoms." John W. Boyce, M.D.—Under this title one might, if he aimed at completeness, write a book on the practice of medicine. Certain points will be mentioned only because they are unusually common or because it is believed that they are unduly neglected in ordinary practice.

Every physician has many patients who come asking for a heart examination. Such patients usually insist that we listen to detailed descriptions of the exact character of the symptoms but there seems little difference in their significance. Passing for a time the minority of cases in which cardiac disease is found, it will develop that the patient is not in the least satisfied with the heart examination for which he professed to come. He wants to know why he is conscious of his heart beat, or why he has such a feeling about the heart. Often he will admit that he has similar and equal sensations here, there, and elsewhere, but they arouse little curiosity except as they happen to occur in the precordia. He can never grasp that they are of no more importance when located in the precordia than when in the left knee, the right great toe, or the vertex. The *why* of the thing is often difficult to determine and more often impossible to explain to the patient. In the search for the *why* the book of diagnosis may be exhausted. Occasionally the head to foot examination of an organized group or observation in a hospital is necessary. These are, however, sometimes harmful: they are to be avoided if not absolutely necessary after a simpler examination.

Hyperthyroidism should be thought of first. Next it should be born in mind that tuberculosis often causes rapid pulse, nervousness, and chest pains. All varieties of digestive disorders are to be remembered.

Passing over the numerous physical conditions that are less frequent than those mentioned, we come to the very important field of psychic causes, to the evil effects of expectant attention to the cardiac function. This is the most important consideration that comes under our subject.

It is too little appreciated that fear is all the more damaging if it is subconscious. Cardiophobiacs who have consulted three, four, or five physicians in rapid succession will, with a grave face, assure you that they are not the kind who would worry about the matter. Each physician was compelled to examine the heart for himself, thus focusing attention further on the heart.

There are no sound rules that can be laid down by word of mouth that apply in general. The requisites are care, common sense, and tact, rather than extensive knowledge. It may happen that one with the keenest intellect, the most accurate knowledge of pathology, and the noblest of intentions, may utterly fail in applying them to the practical needs of his patient, while another with little concern for sound principles may, by his fortunate personality, so inspire confidence and divert attention as to be highly successful. Such a physician may save a patient from a lifetime of invalidism and yet have a naive misconception as to how he did it.

The most important point is to hold the patient. Continuity of management is absolutely essential. The second point is that the patient should be held by the simplest possible means and that one should avoid focusing expectant attention on the internal organs by unnecessarily extended or repeated examinations, by elaborate mechanisms of treatment, or by unduly detailed or technical explanations of the inner workings of the machine.

In the discussion that followed, Dr. George J. Wright declared that most varieties and manifestations of fear are referred to the viscera and he suggested that the principles which apply to cardiac symptoms will also apply to gastric symptoms. He said that physicians should study more their own functional reactions and be prepared to consider the emotional states of patients.

A. B. THOMAS, M.D., *Reporter.*

BERKS—APRIL-MAY-JUNE

The monthly meeting was held at 3.15 p. m., Tuesday, April 8, at Medical Hall, with the president, Dr. R. M. Alexander, in the chair.

"The Differential Diagnosis of the Acute Abdomen." H. L. Northrop, M.D., professor of Surgery in Hahnemann Medical College and Hospital of Philadelphia.—In considering the acute abdomen, we find some of the diseases producing this condition medical and others surgical. Those conditions producing an acute abdomen which should be treated medically are markedly fewer in number than those which should be treated surgically. Some of the most serious of these diseases are infections, and since medicine is limited in its application, surgery has an extended field. There are men, as we know, who limit their surgical field to the abdomen alone. There is a further restriction in the practice of other surgeons who limit themselves to one organ or system of organs of the body as in the case of the genito-urinary surgeon or the gynecologist.

The symptoms of the acute abdomen arise suddenly and is severe. There is pain, intense and agonizing, which puts the patient to bed; shock is present, with

prostration, pallor, weak pulse and a rapid pulse and very frequently vomiting. One can easily be led astray by the fact that the temperature is only slightly elevated or that the pulse rate has not risen and draw the conclusion that the attack under observation is not of a serious nature. The pulse is often a better indicator than the temperature. In acute appendicitis, for instance, a rise in the pulse rate should occasion an increase in the watchfulness of the surgeon, for very frequently this demands surgical intervention. Abdominal rigidity (reflex in origin) is a symptom and can be moderate or boardlike in character. Usually, the greater the rigidity the greater or more severe is the type of case. The rigidity may involve a part of a muscle, an entire muscle, the muscles of one side of the abdomen, or the muscles of both sides. Distension is not present in the early stages as a rule; a retraction of the abdomen may be a more important symptom. Tympany is heard in the early hours of disease when a viscus is paralyzed and balloons.

The greater the amount of experience, and the better the ability to read signs and symptoms, the more likely it will be that a diagnosis will be made in a case of an acute abdomen. The best diagnosticians are always glad to have the reports of the clinical and x-ray laboratories. There is one thing of which we can be reasonably certain: in the case of an acute abdomen medicine is often of little avail, and surgery should be called upon. Frequently the abdomen must be opened, and opened very early, even if a diagnosis has not been made, before peritonitis or some other serious complication arises. Usually a good dictum is the following: the greater the doubt, the greater is the need for action. Among the causes for acute abdomen, other than those caused by infections, can be mentioned (1) injuries to the abdomen and (2) perforations.

Injuries: Mention of several cases will illustrate the point.

Case 1. A Bailey, Banks & Biddle employee, while walking across the street, a number of years ago, was struck over the splenic area by the point of the shaft of a hansom. There occured almost immediately a serious shock and yet there was no external indication of marked violence upon examination. There was tenderness in the splenic region, the pulse became more rapid and weaker, pallor developed, and dullness in the splenic area. A diagnosis of laceration of the spleen was made. The man was operated upon, the spleen removed, with the usual after treatment, and made a good recovery.

Case 2. During the construction of the Wanamaker store, a man who was stooping over on one of the lower floors was struck in the lumbar region by a falling scantling. A diagnosis of a torn left kidney was made in this case.

Case 3. A pugilist, following a fight in which he had been struck over the upper right abdomen, posteriorly, was found to have a torn liver. In similar case, the victim having been hit over the epigastric region, it was found upon operation, that the posterior wall of the stomach had been torn, with the resulting leakage in the lesser sac, through the foramen of Winslow, and into the greater sac of the peritoneum.

Case 4. In another instance of abdominal injury, this time occurring in a man who was a lathe worker. The block upon which this man was working was thrown off the lathe, striking the worker in the abdomen. Operation revealed an opening in the ileum, located in the pelvis some distance from the point of injury.

Cases such as these point out that one cannot be too careful in the study of a patient who has had an abdominal injury. Merely because no marks of external violence are found, the suspicion of an internal injury should not be ruled out. When an unexpected blow, has been delivered to the abdomen, the muscles being relaxed, the full force of the blow is likely to be spent upon the organs underneath and the wall of one of the organs ruptured.

Perforations: This condition can be found in the bowel, gall-bladder, ureter, urinary bladder, urethra, and, as the obstetricians so well know, in the uterus. These cases are surgical. So frequently one hears a history of a laborer, a hurriedly eaten meal of coarse, indigestible food, and a previous history of excellent health. There is a sudden severe pain, fainting, pallor, pinched face, and boardlike rigidity of the abdominal wall. In nine out of ten cases, boardlike rigidity means the rupture of a viscus, and certainly with the above symptoms. This is a picture of an acute abdomen, and is a surgical condition. If the patient comes to the operating room table immediately the surgeon may cauterize the edges of the ulcer, close it with a purse-string suture, and close the abdomen without drainage. What greater triumph could there be for surgery than such an instance in saving life in this fashion.

At the Philadelphia Hospital at present, there is a forty-year-old German, who was brought in because he had vomited blood. He was put to bed and placed under medical care, which of course included diet. He, however, continued to have pain after the taking of food. After a second hemorrhage occurred, he was given Normet's solution. There was a repetition of the previous events. He had an intensely acute abdomen, and was operated upon. There was found a heavy induration of the anterior wall of the stomach and a small perforation. The perforation had not leaked. In the approach to the perforation there were found a few feeble adhesions tending to bind the surrounding structures over the site of possible leakage. The left lobe of the liver, which was providentially near, was used to close the wound. This patient has progressed in a normal fashion since, and has had no hemorrhages in seven days, although he had five or six prior to operation. Normet's solution is well liked, especially in that type of case in which there has been sudden hemorrhage without sufficient time to obtain a donor. It certainly is better than calcium lactate or horse serum.

In considering the *ulcer*, we have both (1) the chronicity and (2) the periodicity. The length of time after eating before the pain appears indicates, often, the location of the ulcer. It is different from the history of a duodenal ulcer in which pain is present a few hours after eating and can be relieved by baking soda or by taking of food. In gastric ulcer the pain comes on in an hour or less after eating.

(3) Gastric analysis shows that at first hydrochloric acid is increased and later diminished.

In *cancer* of the stomach, we have that well-known triad of symptoms: (1) pain; (2) vomiting; and (3) hemorrhage. The first symptom is usually the most valuable. The following facts are helpful in making a decision: (1) It is more frequent in men than women. (2) It is usually found in the forty-sixty year limit. (3) There is the history of a loss of weight, 20, 30, or 40 pounds in a year. This, in itself, should always require an explanation. (4) Cachexia.

The long-continued history of gastric distress, with eructation and a slight vomiting is to be considered. Often no blood can be found in the vomitus. The stool should be examined for occult blood. When blood is present in gastric contents it is usually present in large amounts. These symptoms point to cancer.

Which is preferable, resection or palliative posterior gastrojejunostomy in those cases, which during the course of operation, reveal palpable tumors, with possibly enlarged glands or pyloric obstruction? The choice is of small value since the case is doomed. All surgeons have operated, have found these conditions, and have done what has just been advised. Yet all of us have been surprised at the recovery of a number of cases presenting the pathologic picture described.

In discussion, Dr. David S. Grim said he believed that many cases of this nature were not operated on early enough, with the resulting increase of complication and fatality to the patient.

Dr. Cecil F. Freed reported a case of prolonged uterine bleeding in which he had used Normet's Solution with marked success.

As an introduction to his paper, Dr. Northrop showed and discussed a motion picture entitled *Anatomical Landmarks.*

The monthly meeting was held at Medical Hall, Tuesday, May 13, at 3.15 p. m. Dr. R. M. Alexander presided.

"Diagnosis and Treatment of Tuberculosis in Children." H. R. M. Landis, M.D., of the Henry Phipps Institute, Philadelphia, Pa.—This problem has attracted almost universal interest in the disease. Though the incidence is not decreasing, probably because the cases are diagnosed earlier, the death rate is gradually but surely decreasing year by year. Economic crises play a remarkably influential part in the following year's death rate; determining factors in private life frequently drive down the degree of personal resistance, and tuberculosis makes an onslaught.

Years ago, tuberculosis in children, was diagnosed and judged by the same criteria as in adults. Further research reveals there are two distinct types, the infantile and the adult. Occasionally we find the infantile type in an adult. In children the nodules are found throughout the lung tissue, near the bases of the lobes, not near the hilus. The disease now is studied from an epidemiologic aspect, and handled not as an individual but as a fact.

If there is a family with an open case of tuberculosis, 80 per cent of the children up to the age of 12 will show evidences of infection; in a family with an unknown case of tuberculosis, only 20 to 30 per cent of the children present evidence of infection. An open case family should be examined. The younger the child, the more susceptible; adults can be infected, but not so readily, as is shown by the fact that some individuals must be exposed eight to nine years before they show evidences.

Of the tuberculin tests, the von Pirquet is very simple and easy to perform; the intradermal, or Mantoux test, is much more elaborate but a comparatively higher percentage of infected cases are found. With the von Pirquet it is impossible to state the degree of infection present; while the intradermal method is almost quantitative in its accuracy. The site of injection should be examined in 24 hours, and may be reviewed in 72. If there is no reaction, a second or even third dose should be given. Severe, and moderately severe, cases will show a plus 3 or plus 4; others are affected so slightly that there is very little reaction. The intradermal test may be used anywhere from infancy to 80 years of age.

Infantile tuberculosis may show an evolution. The primary lesion is in the lower half of the lobe, away from the hilus, the disease process may stop here; or it may go up the lymphatics towards the hilus. If the child goes on living in the exposed area, this process will continue, and an apical lesion may occur.

School examinations not rarely fail to show evidence of tuberculosis. The D'Espine's sign is perfectly useless. Percussion only gives signs of processes within one to one and a half inches in depth. The x-ray examination is the only definite way of finding out.

Symptoms in children are difficult to demonstrate. The temperature in an otherwise normal child, may go to 99° or 100° F. with only a moderate amount of exercise. Ten years ago nutrition classes were formed for all underweight children; it is now known that weight is no guide to presence or absence of infection. The adolescent will show an adult type, with a latent lesion in the apex; and should be treated the same as an adult.

Latent cases that present active or progressive infection should be in a sanitorium. Patients showing large lymph nodes (uncalcified and early) should go to the sanitorium. Inactive and underweight patients should be in the nutrition classes. Adequate rest and adequate food are always necessary. Patients needing sanitorium treatment should be allowed to remain from one to five years for full benefit. The exposed child with calcified nodules but no symptoms should be in nutritional classes. If the primary lesion is calcified, and no signs, shown by the x-ray, at the hilus, the case may be disregarded. Heliotherapy, per se, is valueless; the prolonged period of rest is the beneficial factor.

This paper was discussed by Dr. Charles J. Dietrich, president of St. Joseph Hospital of Reading; Dr. Hiester Bucher, physician for the public schools; and by Dr. H. G. Stevenson, physician-in-chief of the Neversink Sanatorium.

The June 10 meeting was held at the Wernersville State Hospital, Tuesday, at 3.30 p. m. The president, Dr. R. M. Alexander, took the chair. Dr. Ralph L. Hill, superintendent of the Wernersville State Hospital, in charge of the scientific program, said: "There are two reasons for holding the regular monthly meeting at this institution. (1) The State Committee on Mental Hygiene is aiming to interest the physician in State hygiene. (2) The local physician should be better acquainted with the local institution. At the present there are 328 residents of Berks County in this institution. On June 9, there were 404 patients registered at the three local city hospitals. In the United States there are more beds for mental cases than for all other illnesses including tuberculosis, showing the vast amount of mentally affected. The apparent increase is ascribed to the fact that the public attitude toward the mental hospital has improved. Five years ago, this institution was thrown open to all kinds of mental conditions; previous to this only chronic cases from the other state hospitals were admitted. It is now the desire of the Mental Health Commission to have each hospital a complete unit in which all kinds of cases may be diagnosed and treated."

Dr. William C. Sandy, director of the Bureau of Mental Health, discussed the Mental Hygiene Movement. Dr. Sandy said: "This movement started with the experiences of Clifford Biers, a Yale University student, who became mentally upset and went through the mental institutions in Connecticut. The treatment received at these various hospitals showed the vast amount of room for improvement. During his stay at the hospital he wrote a book entitled *A Mind That Found Itself.* Mr. Biers started the Connecticut Mental Hygiene Society, this in turn became the Mental

Hygiene Association, and this year the first annual National Mental Hygiene Congress was held at Washington. From the beginning of this movement there has been a progressive development of treatment of the mental patient. During the earliest days, the patients were put in jails and almshouses; then through Dorothy Dix, a philanthropist, the institutions in which such cases were kept, were called asylums; later state hospitals. At the beginning, the demented were thought to have devils in them, later they were called lunatics (because of the supposed lunar influences), crazy folk, insane; now they are called mental patients. Psychiatry has lately been termed, "The Cinderella of Medicine," its value and importance only recently being realized. During the World War the temporary officers were the last ones to appreciate the value of neuropsychiatry. Through the association of mental hospitals in medical centers, and the psychiatric wards in general hospitals, there has been brought about a closer association of the allied medical men. A second reason for the advanced interest in psychology and psychiatry is the popular interest in Freud and psychoanalysis. The initial aim of the movement was to improve conditions in asylums, later it changed the institutions into hospitals, and still later it has started and sponsored mental clinics. There are now better educational facilities and training for workers along this line.

There are 800,000 hospital beds in the United States, 400,000 of which are for mental patients. The annual increment for Pennsylvania is 800. The estimate of annual cost for maintenance is $80,000,000; the estimated economic loss is $300,000,000. One to two per cent of school children are mentally deficient. The state and the hospitals are concerned over the mounting cost of taking care of the patients. The sooner the treatment is begun, the better. Ninety per cent of the feebleminded are out in public life. The special classes fostered by the public schools tend to make the feebleminded assets instead of deficits by making them reliable and steady individuals under supervision. The state, by various methods, is trying to promote the hygiene movement. Since the Health Act of 1923, all the hygiene laws have been collected and codified, and the terminology has been changed to more desirable names; voluntary commitment has been made possible, also the long continued parole of mental deficients during proper behavior. Every hospital is to become a diagnostic and treatment center; new institutions are to be erected wherever necessary. There are now separate institutions for epileptics, for the male defective delinquents, and for children, in Pennsylvania. In 1921, there were 17 mental health clinics in this State; this year there are 65."

Dr. J. Allen Jackson, superintendent of the Danville State Hospital, in discussing mental clinics, said: "The mental clinics depend on the individuals in the community especially the schools, courts, hospitals, and physicians. The location of the clinic should be in some health center. The psychiatric training of the physician should begin in medical school, and should continue at the local institutions."

Dr. Henry I. Klopp, superintendent of the Allentown State Hospital, discussed the mental hygiene of childhood. He stated: "The institution for psychiatric ailments in children is located at the Allentown State Hospital. The ages of the inmates range from 7 to 16 years. Judge Schaeffer sends some cases from Berks County to the Allentown Hospital. In studying the abnormality of make-up in emotion and behavior in an adult individual the conduct disorders can be traced back to childhood; for this reason it has become important to study and segregate all children with abnormal conduct. The treatment at this institution tends to influence the thinking, feeling, and acting toward the right direction to form the later character. By the time the child is six years old his moral education should be nearly complete. The future virtues should be attained spontaneously. Next to the family in importance is the school, especially the teacher, in the early years; the Sunday school also should not be forgotten, for the better understanding of the juvenile delinquent. In studying the reason for certain behavior, one should look to the environment and, especially, study the parents. There are such things as overindulgence and oversolicitousness. Learn the proper approach to the child in order to treat him. Certain habits should be modified, others prevented, and others praised. The aim of mental hygiene should be not only prevention but also to attain universal happiness for the individual."

PEARL E. HACKMAN, M.D., *Reporter.*

DAUPHIN—JUNE

The June meeting was held in the Academy of Medicine Building, Tuesday night, June 2, with 58 members and several visitors present.

Dr. Funk, chairman of the Necrology Committee, read a resolution on the death of Dr. A. L. Shearer.

The evening's entertainment was a symposium on syphilis.

Dr. Everhard spoke on syphilis as a public health problem. He feels that there is a definite lessening of contagious syphilis through the discovery of the spirocheticides, arsphenamin and bismuth. It is his opinion that within the next 50 years the disease will be out of the category of major public health problems. Contrary to popular belief, he does not feel that there has been an increase of neurosyphilis.

Dr. L. W. Wright discussed the diagnosis of syphilis. This is based on (1) a careful history; (2) a good physical examination; (3) laboratory diagnosis; and (4), provocative tests. After describing the chancre, he emphasized the value of the dark-field examination for the search for spirochetes. This is of greater value than the blood Wassermann in early stages of the disease. The blood Wassermann reaction is a routine procedure in many hospitals. In one large local hospital it was found that in 10.3 per cent of all admissions during a year, a positive Wassermann reaction was found, irrespective of the disease which brought the patient to the hospital. Dr. Wright feels that a blood Wassermann should be done on all patients. It is his belief that the antibody content of the blood varies in a given individual from day to day. This accounts for the varying Wassermann reports in the same patient. The provocative test of administering one or more injections of arsphenamin helps to determine the degree of positivity. Wassermann-fast individuals frequently have spinal syphilis. The Kahn test is valuable only as a confirmatory test, and should not be depended upon alone.

Dr. Oenslager discussed the treatment of syphilis. He claims that the best way to administer mercury is by inunction, using a 50 per cent calomel ointment. One drachm is rubbed into the skin daily using a different part of the body each day. The required rubbing time is 15 to 20 minutes. The red iodid of mercury, in doses of 1/16 to 1/8 grain, three times a day, or mercury in the form of flumerin (0.5 gr.), intravenously, are very efficacious. Bismuth (2 gr. in 16 min. of emul-

sion) injected deeply intramuscularly in the buttocks every third day is much used. He has had no optic atrophy in the use of tryparsamid. In the tertiary stage of the disease he uses the iodids, either potassium iodid, 10 gr., three times a day, or sodium iodid 30 gr., intravenously. His usual course consists of neoarsphenamin for 8 injections, followed by bismuth intramuscularly, and arsenic and mercury by mouth. After two or three such courses a blood Wassermann test is made and the patient kept under observation for a year.

Dr. Ridgeway, by special request, discussed the malaria treatment of paresis. It works best in cases of short duration that have not sustained much brain damage. The most hopeful are the manic types of paresis. He has treated about 170 patients with very good results for most of them.

MATHEW H. SHERMAN, M.D., *Reporter.*

FAYETTE—JUNE

The regular monthly meeting was held June 5, 1930, at 8.30 p. m. Dr. R. P. Beatty, Uniontown, Pa., presented a paper on "Urinary Retention—Causes and Management." Dr. Beatty said, in part: This symptom complex is one of the common emergencies with which the physician must deal in his daily practice. It may be proper to distinguish between retention and suppression. The former is of mechanical origin, while the latter refers to the inability of the kidneys to secrete urine. Urinary retention preponderates in the male, though occasionally seen in the female. For convenience, the causes of urinary retention are divided into those outside and those within the urinary tract. The extra-urinary causes are:

1. Affections of the spine. This includes injuries, infections, and new growths involving the cord.

2. Operations in the abdomen or pelvis and plastic procedures around the vagina.

3. As an accompaniment of psychosis, or a psychoneurosis, particularly in the female.

4. Ischiorectal abscess. Of the intra-urinary causes, the important are: (a) Ureteral calculus. This is particularly true if the stone is impacted at the ureteropelvis or uretero-vesical sphincters. (b) Acute cystitis. (c) Stone in the bladder, particularly if impacted at the internal sphincter. (d) Acute infections of the prostate gland, seminal vesicles, and tissues around the prostate. (e) Prostatism, including hypertrophy, true edema, fibrotic contracture, and median bar. (f) Cancer of the prostate gland. (g) Acute posterior urethritis. (h) Urethral calculus. (i) Urethral stricture. (j) Rupture of the urethra. (k) Imperforate urethral meatus.

Some men, judging from their experience in treating prostatics with or without renal insufficiency, which are due to obstruction to urination, believe that suprapubic cystostomy is superior to intermittent catheterization. Thus, this group resorts to cystostomy early for relief of retention from paralysis. The retention complicating operations should be treated by catheterization as often as necessary to prevent over distention. This is usually of short duration and requires no further comment.

Large ischiorectal abscesses, particularly if secondary to prostatic infections, can produce retention through the pressure of the mass itself. Evacuation of the pus is usually sufficient. Inflammation or calculus formation in the upper urinary tract is best treated by relief of obstruction and drainage of the kidney or removal of the stone if present. The bladder, if the seat of an acute inflammation, recovers sooner if put at rest by cystostomy. Every one recognizes the value of this procedure in the presence of stone too large to pass either spontaneously or by the aid of the lithotrite. In acute prostatitis, retention may be relieved by the use of frequent sitz baths and hot enemata, with the aid of suppositories containing belladonna and opium.

A hypertrophied prostate is engorged with blood and in such a case the best catheter to use is either a woven silk coudé or a bicoudé. Rubber catheters are often impractical and steel or silken catheters are sometimes dangerous. A small amount of urine should be removed at one time. Patients suffering with urethral stricture and strangury should be relieved by woven silk filiforms. A bougie or catheter following will often give temporary relief.

Rupture of urethra occurs through direct trauma. A small amount of bloody urine is often voided. The treatment consists of retrograde catheterization if a soft catheter is not successful.

Dr. A. M. Duff, Jr., of Republic, Pa., presented a paper on "Injection Treatment of Varicose Veins," and said that in the past, among others, Pravaz attempted to obliterate veins by means of ferric chlorid. Others tried 5 per cent alcohol, red mercuric iodid, etc. These attempts failed because the liquid was too caustic and infections and complications ensued.

Sicard noticed, during the war, that certain solutions on being injected into the veins brought about their obliteration. Since that time, he has reported 325,000 injections without pulmonary embolism.

It has been pointed out that the liquids injected in the veins do not have any coagulating action on the blood. The changes brought about in the vein are due to an irritation of the endothelium with congestion and proliferation. The fibrin of the blood is deposited on the walls of the injected vessel, adhering to the entire surface of the injured endothelium.

Old persons with enfeebled health should not be given injections. Organic complaints, as myocarditis diabetes and kidney trouble are contra-indications. Varices in which there is extensive edema of the lower limbs should not be injected. A recent phlebitis should not be injected.

Among the solutions used for injections, are sodium, salicylate which are used in concentrations of 20, 30, and 40 per cent. Red mercuric iodid, 1 c.c., to distilled water, 1 c.c., quinin, urethan, invert sugars, sodium chlorid, 20 per cent.

The instruments used are generally 3 or 5 c.c. glass syringes with steel, nickel, or platinum needles. The recumbent positions may be used. The solution is injected slowly while signs of leakage are looked for. If none are present, the injection is completed, the needle withdrawn and a gauze pad applied. An intense cramp sometimes follows the injection and lasts two or three minutes. The injections may be repeated two or three times a week, and very often, patients performing hard physical tasks continue at their work.

BENJAMIN HALPORN, M.D., *Reporter.*

LEHIGH—MAY

The stated meeting was held at the Elks Club, Allentown, May 13. Dr. John M. West, of Allentown, formerly otolaryngologist of the Eye Clinic of Prof. Silex, in Berlin, Germany, addressed the society on, "The Clinical Results of the Intranasal Tearsac Operation."

With an experience of more than 1600 intranasal operations on the lacrimal apparatus, the speaker described the technic of his operation as now done, and

demonstrated, with lantern slides, many instances of acute phlegmon, and of mucocele of the tear sac, and also of lacrimal fistula, showing how the intranasal procedure effects a cure.

With the intranasal operation a permanent communication between the conjunctival sac and the nose is re-established in cases of closure of the nasolacrimal duct, and in this way the physiologic drainage from the eye into the nose is restored, and the disease is cured.

The operation (always local anesthesia, even in children) is indicated in all the different clinical conditions caused by nasal duct closure, that is, in epiphora, dacryacystitis with or without dilatation of the tearsac, in phlegmon of the sac, and also in cases of lacrimal fistula.

The advantages of the intranasal method are: (1) physiologic drainage of the eye into the nose is restored, which secures a dry eye; (2) the restored drainage causes the pathogenic bacteria to disappear from the conjunctiva, which is very important where intrabulbar operations (cataract, discission) are indicated; (3) a prolonged and usually painful treatment with probes is avoided; (4) an external skin incision or curettage necessitating an external bandage, and other disadvantages are avoided; (5) the entire treatment is usually completed in a week.

J. ROLAND HELLER, M.D., *Reporter.*

MONTGOMERY—APRIL

The April meeting was held, April 2, at the Montgomery Hospital, Norristown. Since the attendance was so large, it was decided to meet in larger quarters in June.

The speaker of the day was Dr. Thomas McCrae, professor of medicine, Jefferson Medical College, who spoke on nephritis. He said in part: classification is difficult; the term nephrosis includes degenerations, not inflammations; the albuminuria of fevers; metallic poisoning, as mercury; the toxemia of pregnancy; and lipoid nephrosis.

In acute nephritis (with edema), no diuretics should be given. The focus of infection should be found and tonsils, sinuses, etc., eliminated. Salt and water intake should be limited.

In acute hemorrhagic nephritis, which is usually mild and follows infections such as tonsillitis, little edema is present. There are few casts, but red blood cells are present in the urine. These patients usually get well after a rest in bed, but the disease may become chronic.

In acute embolic nephritis, which follows endocarditis, few of the glomeruli may be damaged. The prognosis is good.

Chronic nephritis may be either parenchymatous or interstitial. Parenchymatous, with edema (the wet form), may be followed by secondary contracted kidney. A salt poor, not salt free diet is recommended, or salt substitutes may be used. Diuretics and intravenous mercury should be given cautiously. Protein intake should not be below the minimal requirement, 60 to 70 grams a day. If interstitial nephritis, with nitrogen retention (the dry form), with the contracted or arteriosclerotic kidney, care in diet and drink is most important. There are no medicines known that will stay the progress of the disease. Symptoms of hypertension, anemia, heart insufficiency, or uremia are to be treated.

Albuminuria retinitis does not always mean death in two years. Athletes may have albuminuria and red blood cells may be present in the urine. No damage results if the kidneys are sound.

Postural albuminuria may come from ptosis of the kidney or lordosis. Iron is believed to be of little value. Tests, as the Mosenthal, are valuable in showing the relative work done by the kidney in the day and in the night. A kidney behind in its work for the day attempts to catch up in the night.

W. W. DILL, M.D., *Reporter.*

MONTOUR—MAY

For a number of years the regular May meeting has been held at the Danville State Hospital and has been devoted to a discussion of practical neuropsychiatry and invitations to this meeting have been extended to the physicians in the twelve counties comprising the Danville State Hospital district and each year the number of physicians availing themselves of this opportunity has been progressively increasing.

This year, at the request of the Mental Hygiene Committee of the State Society, the meeting held on May 22, assumed the rôle of an Annual Mental Hygiene Day for the physicians of the surrounding counties with the Danville State Hospital acting as host. During the morning the hospital was open for inspection, and visiting physicians were shown through the institution by the superintendent and members of the medical staff. At 12.30, luncheon was served and the guests were welcomed by Dr. J. Allen Jackson, superintendent of the Danville State Hospital and chairman of the Mental Hygiene Committee of the State Society. At 1.30 the following mental hygiene program, having for its general theme methods of diagnosis, treatment, and results of the same in mental patients, was presented by the superintendent and medical staff of the hospital as follows: "Comments on the Physical Diagnostic Clinic of the Danville State Hospital," by J. Allen Jackson, M.D.; "A Preliminary Report of Electrocardiograph Studies of the Mentally Ill," by C. A. Zeller, M.D.; "A Preliminary Report of Blood Chemistry Findings, of the Mentally Ill," by H. F. Hunt, M.D.; "Some Results of Treatment," by H. V. Pike, M.D.

Dr. Jackson, commenting on the physical diagnostic clinic of the Danville State Hospital, drew a contrasting picture of the old and present day methods of approach to the study of the mentally ill and stressed the great value of group diagnostic procedures in the evaluation of certain physical conditions that might prove the pathologic factors in the development of the psychoses and the scientific value of the recorded data as given to the profession in contributions to current medical literature.

The paper of Dr. H. F. Hunt, pathologist of the Geisinger Memorial Hospital and the Danville State Hospital, dealt with blood chemistry studies consisting of sugar, nonprotein, nitrogen, urea, creatinin and uric acid determinations in 173 patients. In this study an attempt was made to determine whether or not there were significant chemical changes occurring in the blood of patients mentally ill, and the findings were analyzed on the basis of the mental diagnosis of the patient regardless of his general physical condition. The conclusion of Dr. Hunt was: "Blood chemical examinations are of no value in the psychiatric diagnosis of patients mentally ill."

Dr. C. A. Zeller, of the Danville State Hospital medical staff, presented the following conclusions as a result of a study of 100 mental patients by the use of the electrocardiograph: "These cases included practically all types of psychoses and cardiographically there were found evidences of organic myocardial

changes in 17 cases of manic depressive psychosis of a degree too slight to be demonstrated by ordinary clinical methods of examination, but, nevertheless, of sufficient importance to render them a possible factor in the fatal termination of many cases in which exhaustion has been given as the cause of death. The other groups showed no changes other than those naturally expected from the underlying physical condition. This paper represents probably the first report of electrocardiographic studies of mental patients.

In the concluding paper of the afternoon, Dr. H. V. Pike, clinical director of the Danville State Hospital, presented in tabulated form the results of treatment of 751 consecutive admissions of mental patients over a period of two years. His conclusions were as follows: (1) Statistics relative to the results of scientific treatment of mental disease are frequently misleading as they fail to attach due importance to the fact that practically half of all cases admitted to state hospitals are what the surgeon would term "bad risks" and about one-third are in the terminal stage of physical disease. (2) Of the total number of cases treated, from 35 to 45 per cent should respond to treatment to such a degree that they will no longer require hospital care. (3) Of the unfavorable types of cases, 15 to 20 per cent may be improved to such a degree that they may live at home under supervision. (4) Of the favorable types of cases, from 50 to 60 per cent should make a good recovery in a reasonably short period of time.

The paper was illustrated with a selected group of cases showing the results of treatment over a period of a few months.

The interest manifested by the physicians present, and there were representatives from all the counties of the Danville State Hospital district, was extremely gratifying and showed the progress that is being made by the Mental Hygiene Committee of the State Society in its intensive work along mental hygiene lines in connection with organized medicine.

HORACE V. PIKE, M.D., *Reporter.*

PHILADELPHIA

May 28, 1930

OBSTETRICAL NIGHT

Exhibition of motion picture films in obstetrics, from the Chicago Lying-In Hospital: (1) Breech presentation; (2) forceps delivery; (3) asphyxia in the newborn. By Dr. Edward Lyman Cornell, of Chicago, Ill. Before presenting the pictures, Dr. Cornell said that the motion picture has a wide field in the teaching of medicine, especially of obstetrics. The film on the desired subject is always available at a stated time; it can be viewed by a large audience; it can be stopped for detail; the visual effect is striking and lasting; and the pictures can be dovetailed into didactic and manikin work. In obstetrics, the films are especially valuable in instructing on forceps, breech presentations, and versions. The asphyxia film shows first the improper, then the proper, procedures both under ideal conditions and in emergency. The breech film gives in detail the steps in the average, normal breech delivery. The forceps film gives a history of the instruments as well as the application.

Discussion: "When and Why Should Labor Be Artificially Terminated?" Dr. Barton Cook Hirst gave briefly the following indications for the termination of labor: If the fetal head has been stationary for two hours in the second stage; if the fetal heart has fallen to 100 for one minute; prolapse of the cord; disease of the heart or aorta; myocardial weakness; serious internal or external hemorrhage; grave intra-abdominal conditions; malpositions or malpresentations; insuperable disproportion; in cases having had a previous cæsarian section, to prevent rupture of the scar; in nervous exhaustion, to avoid shock; in debilitating disease for the same reason; in rupture of the respiratory tract, with subcutaneous emphysema; in threatened or actual rupture of the uterus; after a long first stage; to extract a live baby from a dead mother; in eclampsia after eliminative measures prove ineffectual in first or second stage. In all cases of head presentation, it is Dr. Hirst's routine to end the second stage under anesthesia, with forceps, since it is shorter, affords better control, and abolishes acute pain.

Dr. R. C. Norris said that, in a normally progressing labor, two things can be done to relieve suffering and to shorten the process—Potter's version or forceps. Management of the soft parts of the birth canal and skillful use of forceps have become practically routine. The use of Gwathmey analgesia (rectal anesthesia) with a specially trained nurse to give it, has been most helpful. Ironing out the perineal wall is too violent and should not be attempted. Relaxation should be the aim in treatment during the first and early second stage. He uses the central episiotomy, since no muscles are cut thereby and fascial union occurs readily afterwards. Natural dilatation should be allowed, relieving pain. In a forceps delivery a clock should be used, to insure a slow procedure, imitating nature. For the multipara, nitrous oxid and oxygen are used, and a small dose of pituitrin given when the head is on the perineum will often save a forceps delivery. Twilight sleep, nitrous oxid, and oxygen, morphia and rectal anesthesia with a skilled anesthetist, all have their place.

Dr. J. Stuart Lawrance, speaking from the standpoint of the general practitioner, said that there are 7 maternal deaths per 1000 births. Since infection increases with the operative delivery rate we should reduce the latter. The Tweedy test of labor has been in use at St. Mary's Hospital for ten years and has been found to have marked beneficial influence upon the complications of labor, on the operative delivery rate, on maternal and infant mortality and morbidity. The test consists of observation of the temperature and pulse of the mother and the fetal heart every two hours. If the temperature and pulse reach 100, maternal distress is indicated; if the fetal heart exceeds 150 or drops below 120 there is infant distress. Unless there is one of these indications of distress, the labor is let alone.

Dr. Jesse O. Arnold pointed out that since experience and skill of the obstetrician, and the environment and type of patient have so much to do with success, it might be well if everyone should not do obstetrics.

Dr. George M. Boyd took a middle position, feeling that too much surgery is being done. Labor runs physiologically a certain course involving a time limit. This should be shortened only for a definite and fixed purpose. He favors median episiotomy, and frequently uses forceps to end the second stage, though not to shorten it.

Dr. E. A. Schumann said that observation of the lower animals will convince anyone that the female is never restored to normal after labor, her activities are lessened. The objects in modern civilization are first, living children; second, restoration of the woman to as near a virginal state as possible. After a long and tedious normal labor, even without laceration, there is a stretching of muscles and fascia from which the

patient never recovers. There is always some descensus of the uterus and loss of tone of the pelvic floor. Therefore, some rapid method of delivery with incision and repair of the pelvic floor, would seem advisable.

Figures from the Frankford Hospital, showing a very high operative delivery morbidity, were presented as argument in favor of conservative therapy.

Dr. J. A. McGlinn stated that obstetrics in America is not as bad as painted here tonight, for it is now unusual for a patient to come to labor without having been at least partially studied, hence we have fewer terminal toxemias, and fewer infections. Many of the infections which do occur are due, not to introduction from without, but to organisms dormant in the cervix. Much teaching is now being done both in institutions and organizations to bear this out.

Mary A. Hipple, M.D., *Reporter.*

WARREN—JUNE

The meeting, held on June 16, was attended by 23 members.

Dr. C. J. Frantz described an unusual case of dislocation and fracture of the neck of the humerus, which required a resection of the head of the humerus.

Dr. Paul Weston gave an interesting and practical talk on what is of value in laboratory diagnosis. Many complicated measures have been used at different times, which have been of little real worth when applied to every day clinical practice. Thus, one should know what to ask for and what kind of a specimen to send in order to obtain an intelligent report. The leukocyte and the differential counts have their value, but to take a blood sugar frequently after the urine is free from sugar is of very little importance. Cholesterol is known to be increased in certain conditions, but to determine it adds but little knowledge to the case. Typing pneumococci is of interest theoretically, but has proved to be of little clinical use as far as an aid to treatment. Again there is mention about determining the groups of blood of donors for purposes of transfusion. In large cities, or for professional donors, it is of value, but in small towns, in which the donor is apt to be the relative of the patient, a simple mixing of a drop of blood from each person will give a fair idea of its suitability. The metabolism test is of limited value outside of thyroid cases. There are some examinations that are not made frequent enough; for instance, the examination of feces for parasites, and after intestinal fevers for typhoid carriers. Spinal fluid should be tested for globulin content by the colloidal gold test to distinguish between paresis and other spinal conditions. The von Pirquet test for the presence of tuberculosis is of doubtful value in any child over two or three years, as it is considered, in the cities at least, that most children over two years of age have been exposed or have had tuberculosis, and would, therefore, show some immunity reaction.

Dr. Weston showed that much work is demanded of the laboratory that could be dispensed with, and again much more could be done, if the general practitioner will stop to consider what the true nature of the tests are.

After his talk a four-reel motion picture was shown, illustrating the healing of wounds and the preparation of surgical sutures.

Resolutions of respect were drawn up in reference to the death of Dr. Ernest J. Cowden, who died on June 11. Dr. Cowden was one of the oldest physicians in time of practice in the county, having settled in North Warren immediately after his graduation in 1882, and remained in that village all these years. He was modest and unassuming, and was generally liked by his colleagues and his neighbors.

After the meeting, a dinner was served with Drs. Otterbein, Phillips, Pryor, and H. R. Robertson as hosts.

M. V. Ball, M.D., *Reporter.*

WAYNE-PIKE—MAY

By invitation of the trustees of the State Hospital for the Criminal Insane, the May meeting was held at Farview. The attendance was far above the average.

Mr. Reese, president of the Board of Trustees, welcomed the guests, and after dinner, Dr. William Lynch, superintendent of the hospital, read a paper on "Mental Hygiene." Dr. Lynch pointed out the necessity for more instruction in the colleges on this important subject, drawing on his large amount of experience and going over case histories he pointed out the high percentage of insanity caused by syphilis.

This paper was discussed by his assistants, Drs. Clark B. Holbrook, Friedman, Edward Burns and Arno C. Voigt.

After discussing routine business matters, the visiting physicians were given an opportunity to inspect the hospital and were pleased to observe the immaculate conditions of the wards, workshops and administration department.

For the first time in its history, this society can announce a 100 per cent membership, which speaks well for the officers who have made a special effort to interest a few nonmembers to join.

Edward O. Bang, M.D., *Reporter.*

The Woman's Auxiliary to the Medical Society of the State of Pennsylvania

Mrs. Wilder J. Walker, *Editor*
546 South Street, Greensburg, Pa.

THE MONTHLY MESSAGE OF THE PRESIDENT

Dear Auxiliary Members:

Constitutions and by-laws are dull things, but they are fundamental. On them depends the smooth and orderly conduct of business. If their provisions are clear, simple, explicit, and based on common sense, it's easy to follow them, and everybody knows exactly what to do and how to do it. Experience showed two years ago that our old State by-law machinery was inadequate to our present needs, but the Board postponed any revision pending the publication of the new national by-laws, last July. A committee was appointed at the State Board meeting, October 3, with Mrs. Herman B. Allyn, Philadelphia County, as chairman, assisted by the following committee: our parliamentarian, Mrs. Augustus S. Kech, Blair County; exofficio, Mrs. J. Newton Hunsberger, Montgomery County; Mrs. James I. Johnston, Allegheny County;

and Mrs. Ulrich Peter Horger, Lackawanna County.

These women made a careful study of the new National Auxiliary Constitution, of the Constitution of the State Medical Society, and of the State Auxiliary minutes, and believe that the proposed changes are in accord with all essential provisions, and that they will work, which is, in the last analysis, the acid test of every constitution.

Every member of the committee was asked to present her views to the chairman in writing, and the report submitted by Mrs. Allyn is a composite of majority opinion. Four important changes are suggested: Article VIII, Sections 2, 4; Article IX, Section 1; Article XI. Three important new features are incorporated: Article VII; Article X, Sections 2, 3; Article XII. Otherwise the changes and additions are of slight moment and are offered mainly in the interest of brevity and simplification.

The proposed revision has been submitted to Dr. William T. Sharpless, president of the State Medical Society, and to Dr. Edgar S. Buyers, chairman of the State Advisory Committee of five. Both these gentlemen have examined it carefully and give it their entire approval.

I hope that you will all study these by-laws critically, and come to Johnstown with a very clear idea of what provisions you like, and what you want changed. Remember, it is *your* Auxiliary, and *you* are the ones to be pleased.

You may be interested to know that with the approval of Dr. Buyers and Dr. Appel, the Committee on Public Relations, Chairman Mrs. Edward Lyon, Lycoming County, is planning a little publicity campaign in the interest of pure drinking water. With Editor Hammond's consent, my letter, in the June issue of the PENNSYLVANIA MEDICAL JOURNAL, on the work of the Sanitary Water Board is to be somewhat enlarged and reprinted, and a copy sent to all Pennsylvania County Medical Societies and all the women's clubs in the State Federation, with a request that they publish it in their bulletins and devote one meeting to the subject during the coming season. I count on you all to stir up public opinion to support the Board, particularly in voting the necessary appropriations to carry out its recommendations.

Don't forget the new ruling, that the State Auxiliary books close at midnight on Sunday, August 31. County treasurers should send their check at once to the State treasurer, Mrs. Howard C. Frontz, Huntingdon, to assure their having a full representation at the State Convention. Contributions to the Benevolent Fund should be sent at the same time. We hope that every county auxiliary will be heard from in the support of this splendid and much-needed work.

How many county presidents have sent the reports of their year's activities to the historian, Mrs. David B. Ludwig, 6231 Wellesley Avenue, Pittsburgh, as requested in my letter of April 21? Remember that Mrs. Ludwig can't write history unless you give her the facts.

About the time this meets your eye, I hope to be in Oberammergau, but my monthly letters will appear as usual, and I shall surely be back to meet you all at the State Convention in Johnstown, October 6 to 9. I count on a big meeting, with everybody pulling and pushing together to put the Auxiliary higher than it has ever been before. Mrs. Meyer's plans are splendid, the details marvelously worked out, and doubtless after studying the workings of the National Convention in Detroit, she will be able to carry things through with her hands tied behind her back!

Faithfully yours,

CORINNE KEEN FREEMAN, *President.*

COUNTY AUXILIARY REPORTS

Allegheny.—The annual meeting and luncheon was held, May 27, in the Hotel Schenley. The business meeting included reports of standing committees, election of officers, election of delegates to the State meeting at Johnstown, action upon several amendments to the by-laws, and installation of new officers.

A musical program was given by Janet Turner, violinist, accompanied by Frank Kennedy. Dr. Joseph R. Wentler, the speaker, showed how good food produces good teeth and keeps them good throughout life. The Allegheny County Dairy Council presented a puppet show, "The King of the Pearly Mountains."

The result of the election of officers follows: president, Mrs. James O. Wallace; first vice president, Mrs. Lloyd L. Thompson; second vice president, Mrs. Isaac Davis; recording secretary, Mrs. Charles G. Eicher; corresponding secretary, Mrs. David B. Ludwig; treasurer, Mrs. Homer W. Grimm; directors, Mrs. Charles A. Orr, Mrs. George S. Bubb, and Mrs. George Leibold.

Chester.—The March meeting was held in the nurses' parlors of the Chester County Hospital. About twenty women were present and were the guests of the Hospital at a buffet supper which had been arranged by Mrs. Hollingsworth as chairman of hospitality. The president, Mrs. Walter Webb, was in the chair. Mrs. Mellor gave a stimulating report as chairman of Health and Welfare.

On June 19 the auxiliary will meet at Embreeville as guests of the Poor Directors.

Our auxiliary has met with a great loss in the death of Mrs. Clarence Kurtz, of Malvern, an active and interested member from the date of its organization and we sincerely mourn our loss.

Dauphin.—For the closing meeting before the summer recess, the auxiliary gave a musical tea at the home of a member on River Drive.

The season closes with a sense of things well done; not only was the final meeting a social success, but we

have given to the welfare committee one hundred dollars to be used for the children at the Preventorium Camp, besides contributing three hundred dollars to the State Benevolence Fund.

Through the summer the members will arrange for a rummage sale which will be held in September.

Franklin.—The meeting on May 26 was held at the home of the president, Mrs. Leslie M. Kauffman, in Kauffman. Following the regular business meeting, Mrs. P. D. Hoover gave a talk on the topic suggested in the study program. Mrs. Theodore B. Appel, chairman of District Councilors, and Mrs. Clarence R. Phillips, of Harrisburg, councilor of the fifth district, were our guests and each gave a very helpful and inspiring talk. At the conclusion of the program a social hour and refreshments were enjoyed.

Huntingdon.—On May 14 and 15, in Huntingdon, the auxiliary, assisted by a number of friends, entertained the wives of the doctors who were attending the annual meeting of the Pennsylvania Radiological Society in a joint meeting with the sixth Councilor District.

On Wednesday afternoon the women were taken to a matinee party and, at 7.15 p. m., there was a banquet with the doctors, at the Country Club. Thursday forenoon a sight-seeing automobile trip was followed by a luncheon at the Penn Koffee Shoppe with a bridge party at the Country Club.

Lehigh.—The meeting on May 14 was held at the Americus Hotel, Allentown. Mrs. Charles R. Fox, the president, officiated. A short business meeting preceded a talk on "Historical Pennsylvania" given by Professor William Kutz of the Northampton High School.

Mrs. Fox invited all members to be present at the meeting, June 11, to be held at her home at Northampton, when she will entertain at cards followed by a luncheon.

Mifflin.—The May meeting was held at the home of Mrs. Cassidy, of Lewistown, who served a delightful luncheon. A special contribution to the local hospital, which is being enlarged at this time, was decided upon. Each member gave $1.00 and this is the beginning of a special hospital fund. Other members will give similar benefits later in the year.

There will be a summer recess. In August, however, there will be an annual outing with the physicians.

Philadelphia.—On May 7, the auxiliary gave a tea for the wives of the dentists attending the annual session of the Pennsylvania State Dental Association.

The first Health Institute of the auxiliary was held, May 8, in the County Society Building, and Mrs. Wilmer Krusen, presided. Mrs. W. Wayne Babcock told how the auxiliary came east. Mrs. J. Newton Hunsberger, of Norristown, gave an interesting talk on the national auxiliary, while the accomplishments of the State auxiliary were outlined by Mrs. Walter J. Freeman.

President John A. McGlinn explained the efforts the County Medical Society is making to keep quack doctors from broadcasting and advertising through the daily papers. Interesting talks were given by two honor guests, Mrs. Theodore B. Appel, from Lancaster County, and Mrs. C. J. Purnell, president of the Philadelphia Federation of Women's Clubs.

During the afternoon session, health talks illustrated by pictures were given by Mr. William Chew. Dr. J. Bruce McCreary, of Harrisburg, spoke on child health and Dr. J. Allen Jackson, of Danville, spoke on mental health.

The annual meeting was held May 20 in the Society Building. The following officers were elected to serve next year: president, Mrs. William B. Odenatt; president-elect, Mrs. Joseph C. Doane; first vice president, Mrs. Henry A. Lacy; second vice president, Mrs. Meyer Solis-Cohen; recording secretary, Mrs. R. Powers Wilkinson; corresponding secretary, Mrs. Granville A. Lawrence; treasurer, Mrs. John M. Fisher; directors, Mrs. Wilmer Krusen, Mrs. Orlando Petty, Mrs. Francis Gowen, Mrs. Walter J. Freeman, Mrs. J. A. McGlinn, and Mrs. G. M. Piersol.

Ten delegates were elected to attend the State Convention in Johnstown, October 6 to 9. The names of eleven new members were presented. The annual luncheon was held following this meeting. The honor guests were from the New Jersey, Delaware, and Chester County auxiliaries.

An enjoyable program of readings and music concluded the day.

Washington.—The auxiliary met in the Nurses' home of the Washington Hospital, April 9. This was the annual public health meeting to which various civic and welfare organizations were invited; the program was in charge of Mrs. George W. Ramsey, chairman of the public health committee.

Pictures of the Crippled Children's Clinic, taken by Mr. Roy Heiser, at the Washington Hospital, were ably discussed by Dr. J. H. Corwin, one of the physicians in charge of this clinic. This clinic is held monthly at the Hospital and is in charge of the local chapter of the American Red Cross. These pictures illustrate the way in which practically hopeless cripples are restored to comparative physical health, which reacts on their mental condition as well.

We have had three health meetings and the auxiliary feels gratified to know that so many persons, as a result of these programs, have been given a clearer conception of health problems and their importance to the community.

Medical News

Deaths

MRS. MAUD STAYER, wife of Dr. Maurice Stayer, of Johnstown; April 21.

MRS. JEANETTE R. SHUTE, wife of Dr. Furman R. Shute, of Philadelphia; May 20.

MRS. GERTRUDE C. SWEENEY, wife of Dr. John J. Sweeney, of Doylestown; May 21.

WILLIAM H. WOLF, M.D., of Pittsburgh; Eclectic Medical College, 1896; aged 59; June 1.

MRS. EVA A. HORNE, wife of Dr. B. W. Horne, of Newtown, Bucks County; May 23.

MRS. BLANCHE ROBINSON HOW, mother of Dr. Harold W. How, of Rosemont; May 29.

AMBROSE H. STUBBS, M.D., of Peach Bottom; Baltimore Medical College, 1896; aged 67; May 11.

MAX G. SCHLOTBOM, M.D., of Pittsburgh; University of Pittsburgh School of Medicine, 1918; aged 44; June 6.

EDWIN M. MILLER, M.D., of Millheim; Jefferson Medical College, 1890; aged 62; April 14, of angina pectoris.

WILLIAM M. HERR, M.D., of Lancaster; University of Pennsylvania School of Medicine, 1885; aged 67; June 10.

Edwin C. Bailey, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1878; aged 74; May 25.

Edwin Luther Beckley, M.D., of Philadelphia; Jefferson Medical College, 1879; aged 71; April 26, of cerebral hemorrhage.

William J. Ryan, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1911; aged 63; June 5, of heart disease.

David Lipschutz, M.D., of Pittsburgh; University of Pittsburgh School of Medicine, 1918; aged 44; June 7, of pneumonia.

Lewellyn O. Howe, M.D., of Erie; Jefferson Medical College, 1898; aged 65; April 3, of angina pectoris and rheumatic endocarditis.

Nathan C. Mackey, M.D., of Waverly; New York University Medical College, 1875; aged 81; April 21, of phlebitis obliterans and hemiplegia.

Elmer Noah Piper, M.D., of New Kensington; University of Pittsburgh School of Medicine, 1902; aged 64; May 8, of tuberculous osteomyelitis.

Benjamin A. Thomas, M.D., of Philadelphia; noted surgeon and author of many articles and books on medical subjects; University of Pennsylvania School of Medicine, 1903; aged 51; May 29. Dr. Thomas was professor of urology at the old Polyclinic Hospital, professor of urology and vice dean of the Graduate School of Medicine, University of Pennsylvania, on the staff of the Presbyterian Hospital, and chairman of the Section on Urology of the Medical Society of the State of Pennsylvania, the organization of which he was mainly responsible. He was also an ardent worker of the Committee on Scientific Program.

He was a lieutenant in the Medical Corps of the Naval Reserve and was attached to the Naval Hospital in Philadelphia during the war; a member of the American and Philadelphia Urological Associations, the American College of Surgeons, the Academy of Surgeons, the American Medical Association, the Pathological Society of Philadelphia, and belonged to the University Club, the Springhaven Country Club, and the Union League Club.

Births

To Dr. and Mrs. Mark A. Baush, of Allentown, a son, John David Baush, May 9.

To Dr. and Mrs. Francis S. Mainzer, of Clearfield, a son, Augustus Heinrich Mainzer, recently.

To Dr. and Mrs. Edward Bridges, of the Williamsport Hospital resident staff, a daughter, Betty Louise Bridges, May 7.

Engagements

Miss Helen Isabel Campbell, of Philadelphia, and Dr. William T. Hunt, Jr., of Huntingdon.

Miss Mary Cuthbert Boyd, daughter of Dr. and Mrs. George M. Boyd, and Mr. Murray Hurst Spahr, all of Philadelphia.

Miss Elizabeth Coulter Yarnelle and Mr. William Doane Frazier, son of Dr. Charles Harrison Frazier, of Philadelphia.

Miss Katharine Clark, daughter of the late Dr. and Mrs. John G. Clark, and Mr. James K. Gamble, Jr., all of Philadelphia.

Miss Virginia Frances Farr, daughter of Dr. and Mrs. William W. Farr, and Mr. Edward P. Moxey, all of Germantown, Philadelphia.

Marriages

Miss Mildred Wolf to Dr. Bruce A. Grove, of York, April 24.

Miss Sallie Slifer, of Perkasie, to Dr. Randle C. Rosenberger, of Philadelphia, June 10.

Miss Harriet Burt Bolton, of Bridgeton, N. J., to Dr. Forwood Evans Hanby, of Roslyn, early in June.

Miss Elizabeth Fager, daughter of Dr. and Mrs. V. Hummel Fager, of Harrisburg, to Mr. Martin Brackbill, of Gettysburg, June 6.

Miss Helen Frances Thomas, daughter of Dr. and Mrs. W. Hersey Thomas, to Mr. Utley Wedge, Jr., all of Philadelphia, June 25.

Miss Carolyn Hearne, daughter of Dr. Charles Sheppard Hearne, of Swarthmore, to Mr. Robert Charles Williams, June 21.

Miss Elizabeth Jean Fields Head, daughter of Dr. and Mrs. Joseph Head, to Dr. Ferdinand Fetter, all of Philadelphia, June 18.

Miss Arlene Keylor, daughter of Dr. and Mrs. Walter N. Keylor, of Lancaster, to Mr. Carl A. Weinschenk, of Scranton, June 7.

Mrs. Eleanor Wright, daughter of Dr. and Mrs. John T. Carpenter, of Radnor, to Mr. Richard R. Atkinson, of Philadelphia, May 31.

Miss Martha Rebecca Alter, of New Bloomfield, to Mr. Henry R. Douglas, Jr., son of Dr. and Mrs. Henry R. Douglas, of Harrisburg, June 11.

Miscellaneous

Dr. James E. Ginter, of Dubois, was a recent patient at the Mayo Clinic.

Dr. B. F. Ober, of Latrobe, is taking a Mediterranean cruise and a visit to Asia Minor as a summer vacation.

Bids have been received for a new hospital building to be erected at the State Sanatorium for Tuberculosis at Hamburg, which will cost $300,000.

Dr. Reid Nebinger, of the Geisinger Hospital, Danville, left on June 13 for Vienna, where he will spend two months doing postgraduate study.

Miss Caroline N. Taber, who recently died in Philadelphia, left bequests of $200 to Dr. Horace C. Bare and $50 to Dr. S. Horton Brown, for "their kindness to me."

The Doctor Frederick W. Black Hospital, Lewistown, was dedicated with appropriate ceremonies on May 31. It has a capacity of forty-eight beds, and cost $135,000.

Drs. B. W. Shirey and F. R. Wise, of York, are in Europe, where they expect to visit numerous clinics and hospitals in the larger cities and medical centers of the Continent.

The following hospitals will receive $1000 each under the will of Joseph Judovich, of Philadelphia, who died May 12: Mount Sinai, Northern Liberties, Hahnemann, and Jefferson.

At the eighty-fourth annual banquet of the Northern Medical Association of Philadelphia, held May 19, at the Rittenhouse Hotel, the guests of honor were Dr. W. Wayne Babcock and Richard Beamish, Esq.

Dr. A. Edward Colcher, of Philadelphia, was sworn in as city roentgenologist on June 2. His appointment marks the creation of a post and places him in charge of x-ray work at the city morgue.

One of the chief events of commencement week at Temple University was the laying of the cornerstone of the new $1,000,000 School of Medicine, which took place on Medical Alumni Day, June 18.

An honorary degree of Doctor of Public Health was conferred on Dr. A. A. Cairns, Director of Health

of the City of Philadelphia, at the commencement exercises of the Jefferson Medical College, June 6.

DR. AND MRS. FRANCIS C. LUTZ, of Philadelphia, have recently sailed for Europe, where Dr. Lutz will attend the clinics of Vienna, London, Paris, and Italy, returning home about September 15.

DR. WILLIAM H. SCHELLHAMER, of York, returned home recently after a most pleasant trip to the West Coast. The journey both ways was made principally by air, and many exciting adventures are cited by the doctor.

DR. EDWARD B. HECKEL, of Pittsburgh, chairman of the Board of Trustees of the American Medical Association, had the honorary degree of doctor of science conferred on him by Allegheny College at Meadville.

DR. JAY F. SCHAMBERG has been named president-elect of the Philadelphia County Medical Society. Dr. George P. Müller, president-elect for the past year, will assume office as president on July 1, when the new fiscal year begins.

THE NATHAN LEWIS HATFIELD LECTURE was delivered on May 21, in the College of Physicians, Philadelphia, by Dr. Franz Alexander of Berlin on "A General Discussion of Psychoanalysis with Emphasis on Recent Investigations of Character Formation."

THE CORNERSTONE of the new $1,000,000 Easton Hospital, Easton, Pa., was laid May 11, in the presence of hospital trustees and a large number of persons who had subscribed to the new institution in a community drive for funds, which netted a sum sufficient for a 200-bed institution and a nurses' home.

A CAMPAIGN HAS BEEN LAUNCHED by the Northwest Philadelphia Business Men's Association to raise $200,000 for the West Philadelphia Homeopathic Hospital, 1234 North 54th Street. The proposal to merge the West Philadelphia Homeopathic Hospital and the Hahnemann Hospital has been dropped.

DR. LAWRENCE GOLDBACHER, of Philadelphia, addressed surgeons of the United States Fleet on "The Injection Treatment of Hemorrhoids and Pruritus Ani," May 16, on board the *U. S. Hospital Ship Relief,* anchored in the Hudson River, New York. The address was followed by a rectal clinic.

MORE THAN A SCORE of former stammerers delivered addresses at the tenth annual banquet of the Philadelphia Kingsley Club, at the Hotel Adelphia, June 7. J. Stanley Smith, Philadelphia attorney and founder of the stammerers' forum, was toastmaster. The addresses were on the correction of speech defects.

ON FRIDAY, MAY 23, Dr. Frank C. Hammond, of Philadelphia, addressed the County Medical Societies of Somerset, Mercer, and Huntington Counties of New Jersey on "Medical Ethics and Pastoral Medicine," in the Assembly Building of the New Jersey State Village for Epileptics, at Skillman, New Jersey.

THE FOLLOWING PHILADELPHIANS have recently sailed for Europe: Dr. and Mrs. George Morris Dorrance and family, Dr. and Mrs. Louis H. Mutschler, Dr. and Mrs. Curtis C. Eves, Dr. and Mrs. Hugh Miller, Dr. James A. Irwin, Dr. and Mrs. William Irwin, Dr. and Mrs. Charles H. Grimes, and Dr. Le Roy M. A. Maeder.

DR. WILDER DWIGHT BANCROFT, professor of chemistry at Cornell University, and probably the most outstanding chemist in this country today, delivered the address at the dedication of the Hall of Science of the University of Southern California, June 8. The theme of his address was "Modern Science."

DR. AND MRS. JESSE L. LENKER and family, of Harrisburg, sailed on the *Leviathan,* June 11, for Europe, where they will tour France and Germany. Dr. Lenker will attend the International Hygiene Exhibit and World Health Conference to be held in Dresden, Germany. The conference is sponsored by the League of Nations.

WE WISH TO EXTEND SYMPATHY to the citizens of Bucks County in general, and the County Medical Society in particular, in the death of Judge W. C. Ryan of Doylestown, who died at the Abington Memorial Hospital, April 30, aged 70. Judge Ryan was president judge of the courts of Bucks County, and had always been intensely interested in the activities of medicine.

THE AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY will meet in Chicago, October 27 to 31, with headquarters at the Hotel Sherman. Make your reservations early. The usual convention rates of a fare and a half have been arranged for, and members, to secure this reduction, must procure a certificate when purchasing railroad ticket.

ACCORDING TO REPLIES to questionnaires sent out by Dr. F. M. Goodchild, of New York City, white soaps have won over colored soaps in a battle raging among physicians, health authorities, and nurses all over the country. The controversy was undertaken to determine whether there was any real medical conviction as to the relative merits of white and colored soaps.

READING HAS WON FIRST PLACE on the honor roll of the American Medical Association for results obtained in the elimination of typhoid fever deaths, having no fatalities from the disease this year. Philadelphia, for the fourth consecutive year, also has won a place on the honor roll, having a death rate from typhoid of 0.7 per hundred thousands of population, which is a remarkable record.

DR. GEORGE H. ROBINSON, of Uniontown, was elected a new member of the board of directors of the Pennsylvania Tuberculosis Society, at their meeting held on May 21. Dr. Robinson is one of the best known physicians in Fayette County and has been interested in tuberculosis work for a number of years. He is now county medical director of Fayette County and also in charge of the tuberculosis clinic in Uniontown.

DR. FRANZ ALEXANDER, noted psychoanalyst and pupil of Dr. Sigmund Freud, of Vienna, was guest of honor at a dinner, May 21, in the University Club, Philadelphia. Dr. Alexander arrived recently in this country from Germany, and is on his way to take a chair in the psychology department at the University of Chicago. Dr. David Riesman, of the University of Pennsylvania School of Medicine, was host to Dr. Alexander during his stay in Philadelphia.

THE RESEARCH LABORATORIES of the Skin and Cancer Hospital of Philadelphia were dedicated, June 18. Speakers included Edgar B. Moore, president of the institution; Dr. Albert Strickler, professor of dermatology, Temple University, head of the medical staff, who outlined the aims of the institution; Dr. W. Wayne Babcock, professor of surgery at Temple University; Dr. W. Hersey Thomas, professor of urology of Temple; and Dr. John M. Fisher, of the gynecologic staff of Jefferson Hospital.

DR. ERNEST A. SPIEGEL, Viennese neurophysiologist, and his wife, an authority on colloidal chemistry, have joined the staff of the Temple University School of Medicine. Dr. and Madame Spiegel received offers from several American universities during their present lecture tour through the country, but their decision to join the Temple staff is thought to have been influenced by the research plans of the Temple University medical center.

THE PHILADELPHIA PEDIATRIC SOCIETY announced a prize competition to stimulate interest in pediatrics among the younger practitioners out of medical school less than six years and residing in the Philadelphia metropolitan area. Investigations and studies to be presented must be limited to pediatric subjects. The first prize is $100; and the second, $50. Papers must be in

the hands of the secretary, Dr. John D. Donnelly, 115 Bryn Mawr Avenue, Bala-Cynwyd, Pa., by October 1.

DR. THEODORE B. APPEL, State Secretary of Health, has been appointed a member of the public health administration committee and a member on the subcommittee of state health organization on President Hoover's White House Conference on Child Health. Dr. Mary Riggs Noble, chief of the preschool division of the State Health Department, is on a committee of medical care for children; and Dr. C. J. Hollister, chief of the dental section, is a member of the technical advisory committee on dental hygiene in schools.

THE WILLS EYE HOSPITAL SOCIETY of Philadelphia held their fourth annual banquet, June 5, at the Bellevue-Stratford Hotel, at which time the following officers were elected: Dr. Edward Jackson, of Denver, reëlected president; Dr. Frank C. Parker, of Norristown, vice-president; and Dr. Warren S. Reese, of Philadelphia, reëlected secretary and treasurer. More than fifty members were in attendance. Motion pictures of an eye operation taken by the new magnifying process were shown, and Dr. George E. De Schweinitz delivered an address.

DR. J. WILLIAM WOOD, of Chester, has been appointed to head the board of directors of Delaware County's new $500,000 tuberculosis hospital. Construction will be started within a few weeks. The appointment was made by the Delaware County courts. The institution will accommodate more than 150 persons. It will be erected on the Broad Meadow Farms, Concord township, three miles west of Media. Four other directors were named: T. Chalkley Palmer, of Media; Hugh H. Ward, of Chester; Dr. William Wistar Comfort, of Haverford township; and Kathryn W. Spingler, of Upper Darby.

SUMMER COURSES on public health nursing, school nursing, tuberculosis and its control, nutrition, social hygiene, and problems of social work have been arranged by the Department of Public Health Nursing of the Pennsylvania School of Social and Health Work, located in the Social Service Building, Philadelphia. The courses are designed to give to nurses already engaged in public health nursing further preparation for their work. All students are required to take public health nursing, but may elect other courses according to individual needs.

THE SUMMER CLINICS sponsored by the Chicago Medical Society will be held at the Cook County Hospital, Chicago, Ill., from August 11 to 22 inclusive. Beginning with the May 24 issue, they have published in the Chicago Medical Society Bulletin each week the pathologic conferences conducted by Dr. R. H. Jaffee at the Cook County Hospital. These conferences are becoming as well known as those of the Massachusetts General Hospital, which are published each week in the New England Medical Journal. Those interested may obtain full information from the office of the Chicago Medical Society, 185 North Wabash Avenue, Chicago, Ill.

ACCORDING TO A. P. NEWS REPORT, May 10, Dr. G. A. Hopkins, coroner of Garfield County, Col., successfully removed his own tonsils. Using a local anesthetic and a hand mirror, and aided by a nurse, he performed the operation on himself at a hospital. Every now and then we read about physicians operating upon themselves. We are anxiously waiting to hear that one of our confreres, with a superior complex, has either done a cataract extraction upon himself, or removed a tumor from his brain. When this kind of news comes in, then we may be assured we are getting somewhere.

THE AMERICAN COLLEGE OF PHYSICIANS will hold its fifteenth annual clinical session at the Lord Baltimore Hotel, Baltimore, Maryland, March 23-27, 1931. Dr. Sydney R. Miller, president, will have charge of the selection of the general scientific program. Dr. Maurice C. Pincoffs, of Baltimore, has been appointed by the Board of Regents general chairman of the session, and will make all local arrangements, including the making up of the program of clinics. Business details will be handled by the executive secretary, Mr. E. R. Loveland, 133 S. 36th Street, Philadelphia, Pa. The attention of secretaries of various societies is called to the above dates, in the hope that their societies will select nonconflicting dates for their 1931 meetings.

ON MAY 1 THE PENNSYLVANIA COMMITTEE on Penal Affairs merged with the Public Charities Association of Pennsylvania. This is a step which will be of far-reaching importance to the development of work in Pennsylvania between public and private agencies, particularly as it affects the treatment of adult offenders and children in difficulty with the law. The Penal Affairs Committee becomes the Pennsylvania Committee on Penal Affairs of the Public Charities Association and retains its state-wide council and board of directors. The union of these two important state-wide organizations was made only after careful discussion by subcommittees of each group and after approval had been sought from the Welfare Fund of Pittsburgh and the Welfare Federation of Philadelphia. The merger rounds out the state-wide program of the Public Charities Association by giving it a division on penal affairs. The full strength and influence of the Public Charities Association will be at the disposal of the Pennsylvania Committee on Penal Affairs.

DR. JOSEPH COLT BLOODGOOD, professor of surgery at Johns Hopkins University, during a recent visit to Philadelphia reported a growing feeling among physicians that boards and departments of health in city, county, and state are intruding upon the functions which properly belong with the general medical practitioner. A survey of the country to determine how far health departments and boards were penetrating the field of the family physician is favored by Dr. Bloodgood.

He also warned against so-called cancer "cures" and denounced as cruel to the thousands of sufferers from the disease publicity which raises their hopes and which has not scientific sanction. "Go to your physicians or your specialists in your own community. Thousands of cases of cancer are curable in their incipient stages."

THE UNITED STATES CIVIL SERVICE COMMISSION announces open competitive examination for senior medical technician (pathology) to fill vacancies in the office of the Surgeon General, War Department, Washington, D. C. Entrance salary is $2000; higher-salaried positions are filled through promotion. The duties are to perform research work in histologic pathology, which embodies the preparation of tissues for miscroscopic examinations, the making of stains, and research on staining methods. Competitors will be rated on their education, training, and experience, and will not be required to report for examination at any place. Full information may be obtained from the Commission, Washington, D. C.

The Veterans' Bureau Hospital at Fort Lyon, Colo., is also in need of a medical officer to serve as specialist in pathology. Entrance salary is $3800. Those interested should write to the Commission, Washington, D. C., or to the secretary of the Thirteenth United States Civil Service District, Denver, Colo., and ask for examination announcement No. 51 and application blanks Nos. 2600 and 2398.

THE CORNERSTONE of the new buildings of the Cancer Institute of Paris was recently laid. The new institute is located at Villejuif, a suburb of Paris. Its services have been previously located in the buildings of the Hôpital Paul Brousse. The research laboratories and the consultation service, together with the equipment for roentgenotherapy and radium therapy, were already in existence. But this anticancer center had become so important that it was necessary to give it its own equipment and an independent organization.

A private foundation furnished the first funds, while the central government granted a generous regular appropriation. The next step is to create a hospital of

150 beds. With the fifty-three beds already reserved for patients in the old quarters, there will be more than 200 beds, which will make it the most important hospital and research center for cancer in the region of Paris. The institute has one gram of radium, half of which was supplied by the central government and the other half by the department of the Seine. The research laboratories will be increased and will become more specialized. There will be a large amphitheater for teaching, and pavilions will be erected for lodging investigators who desire to spend some time at the institute.

Leading authorities expressed their alarm at the menace to the future of Great Britain revealed by the quarterly returns of the Registrar General issued recently, which shows that in the last quarter of 1929 the birth rate in England and Wales was the lowest on record, says the Continental Edition of the *London Daily Mail*. Professor Leonard Hill, director of the department of applied physiology, National Institute of Medical Research, sees a grave menace in the decline of the birth rate among European nations, while the birth rates of eastern countries are increasing. He said: "The falling birth rate might be the beginning of the end of the British empire. It is a natural reaction in Britain to the crowded cities. There are economic difficulties and men find it difficult to emigrate. The city life that we are leading here reduces fertility." Sir Harry Bruce-Porter, the eminent physician, declared that the Registrar General's return does not reveal the greatest menace. He said: "It is the birth rate of fit children that is falling, not the unfit. While unfit children continue to be born in large numbers, the fit have to keep them, so that they cannot afford to have children of their own. Apart from the unfit, there are thousands of borderline cases. These are not differentiated in the official returns of births. These returns of the falling birth rate are the greatest argument in favor of voluntary sterilization."

The numbers of nurses who have recently graduated from different institutions are as follows:

Twelve from the Sacred Heart Hospital Training School for Nurses, Allentown, May 21. Dr. Donald Guthrie, chief surgeon of the Robert Packer Hospital, Sayre, delivered the address.

Twenty-one from the Abington Hospital Training School for Nurses, Abington, May 22. Mrs. James Starr, president of the Woman's Medical College of Pennsylvania, delivered the address.

Thirty-three from the Training School for Nurses of the Episcopal Hospital, Philadelphia, May 21.

Sixty-seven from the Jefferson Hospital Training School for Nurses, May 1. The address was delivered by Dr. H. A. Hare, professor of therapeutics.

Twenty-two from the recently combined training schools of the former Woman's Hospital of Philadelphia and the West Philadelphia Hospital for Women, May 21.

Thirty-three from the Methodist Hospital, May 29. Dr. James H. Baldwin, member of the surgical staff at the hospital, and Rev. E. Stanley Shaw, of Calvary Methodist Episcopal Church, were the principal speakers.

Twenty-two from the Jewish Hospital, May 30. Dr. Wilmer Krusen, president of the Philadelphia College of Pharmacy and Science, was the speaker.

Seven from the Nurses' Training School of the Pottstown Hospital, June 6. Dr. Henry D. Reed, president of the medical staff, presided at the exercises.

The spring meeting of the Pennsylvania Clinical Physical Therapy Association was held at the Temple University Medical Center on May 21. The program was as follows: At 3 p. m., physical therapy clinic in the amphitheater of the Temple University Hospital, conducted by Dr. Frank H. Krusen. At 7 p. m., dinner was served. The guests of honor were Dr. William N. Parkinson, dean; Dr. W. Wayne Babcock, professor of surgery; and Dr. William Egbert Robertson, professor of medicine, all of the Temple University Medical School.

At the business meeting of the organization the following officers were elected: president, Dr. W. H. Schmidt of Philadelphia; 1st vice-pres., Dr. R. C. Bull of Bethlehem; 2d vice-pres., Dr. F. H. Krusen of Philadelphia; secretary, Dr. W. T. Fedko of Gordon; treasurer, Dr. R. H. Henry of Allentown; and recorder, Dr. W. W. Becker of Reading; member of the Board of Governors for three years, Dr. J. H. Hennemuth of Emaus.

The evening meeting was addressed by Dr. W. Wayne Babcock on "The Relation of Physical Therapy to Surgical Practice"; Dr. William Egbert Robertson on "The Relation of Physical Therapy to Medical Practice"; and Dr. Frank C. Hammond, chairman of the Temple University Medical Faculty, on "Education in Physical Therapy." Dr. William T. Johnson, of the Graduate School of the University of Pennsylvania School of Medicine, also addressed the meeting.

Great credit is due to Dr. R. C. Bull, the retiring president, for the growth of this organization.

In *The Journal of the American Medical Association*, October 12, 1929, it was announced that the Council on Pharmacy and Chemistry had established a Committee on Foods to examine food products and literature regarding their composition and the claims made in relation to their application and usefulness—all subject to a series of rules, under which the Committee on Foods proposes to operate.

The purpose of the above statement is first, to acquaint the reader with the above movement in the interest of public health; and second, to advise that Mellin's Food and literature concerned have been considered and that Mellin's Food is accepted by the Committee on Foods and that the Mellin's Food Company is entitled to make use of the fact in advertising material and is permitted to use the "Seal" of the Committee. Your attention is requested to this insignia which is reproduced in the Mellin's Food Company's advertisement in this issue.

For many years accurate analyses of Mellin's Food and of Mellin's Food as prepared for the feeding of infants and as applied in the management of the diet in illnesses of children and adults have appeared regularly in this publication and in literature placed in the hands of physicians generally.

Notwithstanding the fact that this consistent work with the medical profession had long ago resulted in establishing Mellin's Food as a product of superior quality, it must be gratifying to the Mellin's Food Company to have it all confirmed by a committee acting upon the authority of the American Medical Association.

A thousand delegates to the annual meeting of the American Red Cross, May 6, heard two doctors urge upon their organization the undertaking of certain readjustments in American family life and the initiation of a comprehensive campaign to give the nation a "health conscience." Professor C. E. A. Winslow, director of the School of Hygiene of Yale University, contended the Red Cross has never had a national health program in the fullest sense. He said there was today an urgent need for a more active and enlightened conscience in regard to health. Dr. Ellen Potter, director of the New Jersey division of institutes and agencies, likewise urged the need of greater physical and mental health. She asserted, the "fact that our social order promotes the survival of the unfit, where in generations past the unfit died in large numbers, makes this problem more acute." The rapid rise of large urban communities, Dr. Potter said, has given rise to a number of deficiencies in many modern homes which cannot be corrected by either private or public social agencies working alone. Coördinated with these agencies, however, she declared, the American Red Cross could meet the need. The successful readjustment of family life, Dr. Potter said, which will make

of parents and their growing children self-dependent, intelligent members of society, is absolutely fundamental to the integrity of democracy. Professor Winslow asserted that at present 5,000,000 children apply yearly for admission to American schools, and that of this number 50,000 are tuberculous. This number rises to 250,000 by the time the children reach high-school age, he said. Could the total of mental diseases and defects be weighed, he continued, they would be found equivalent to "all other types of physical diseases and defects taken together."

A GROUP OF DISTINGUISHED DELEGATES to the First International Congress on Mental Hygiene spent a busy day in Philadelphia on May 3. It was the last day of the pre-Congress tour which had included New York, Newark, New Haven, and Boston. The group included the following eminent foreign psychiatrists and educators: Sir Maurice and Lady Edith Craig, Dr. Nora L. Haworth, Dr. Doris Odlum, Sir Hubert Bond and Dr. William Russell, of Great Britain; Dr. and Mme. Victor Morpurgo, Dr. Guilio Ferrari, Dr. Corrado Tumiati, and Dr. Monpini, of Italy; Dr. Georges Heuyer, of France; Dr. Jur. Lothar Frede, of Germany; Prof. Dr. Jan Piltz, of Poland; Dr. Hans Evenson, of Norway; Dr. Victor Wigert and Dr. Reuben Holstrom, of Sweden; Dr. and Mme. K. Herman Bouman, Dr. M. J. A. Moltzer, Miss Eugenia Lekkerkerker, and Dr. F. S. Meijers, of Holland; Dr. and Mme. Oscar-Louis Forel, Dr. and Mme. Andre Repond, and Dr. M. Tramer, of Switzerland; and Dr. and Mme. Auguste Ley and Miss Kolgraf, of Belgium.

The special car carrying these delegates was met at Philadelphia by LeRoy M. A. Maeder, M.D., medical director of the Pennsylvania Mental Hygiene Committee of the Public Charities Association, and George R. Bedinger, executive director of the same association. All members of the party were entertained at breakfast by the Public Charities Association, after which they inspected the new psychopathic building of the Philadelphia General Hospital where Mayor Harry A. Mackey, Dr. A. A. Cairns, Director of Public Health, and Drs. William G. Turnbull, and Seymour DeWitt Ludlum, acted as hosts. The principal address was delivered by Prof. K. Herman Bouman, M.D., of the University of Amsterdam, on "An Investigation into the Causes of Mental Disease."

The Philadelphia Child Guidance Clinic was next visited, and the delegates were received by Dr. Frederick H. Allen, director, with his staff. The Institute for Mental Hygiene of the Pennsylvania Hospital was the next point of interest. A thorough inspection was made and luncheon was provided the visiting guests by the hospital. At four o'clock, tea was given in honor of the delegates by the English-Speaking Union at their club rooms in the Land Title Building.

The main event of the day was the banquet at the Bellevue-Stratford Hotel given by the officers and members of the Pennsylvania Mental Hygiene Committee of the Public Charities Association. About 300 guests were present. The room was decorated with flowers and flags of the countries represented by the delegates. Each guest was greeted with a printed program containing the seating list, the names of the local committee responsible for the dinner, and the names of the Mental Hygiene Committee of the Public Charities Association. For each guest there was also a place card in the form of a folder giving a brief picture of the committees and functions of the Public Charities Association.

Dr. Cornelius C. Wholey, of Pittsburgh, State chairman of the Committee, presided. Dr. Charles H. Frazier, of Philadelphia, president of the Public Charities Association, acted as toastmaster. Dr. Frazier, in his opening remarks, made a strong plea for the establishment, at the next session of the Legislature, of at least one State psychiatric hospital.

Three of the distinguished foreign delegates were speakers at the banquet. Prof. Auguste Ley, M.D., of Belgium, president, Belgian League for Mental Hygiene, took as his subject "The Right to Punish," and said in part: "The whole transformation of our modern penal laws is based on the research of the criminologic determinism and the replacing of the notion of punishment by that of social defense in connection with the readaptation and the reeducation of the delinquent and the criminal." Dr. Jur. Lothar Frede, Weimar, of the Ministry of Justice, Thüringen, Germany, called for a general reform of prison administration. Dr. Frede startled his hearers and captured the headlines in all the Philadelphia Sunday papers by stating that our modern prisons were "high schools for crime." Dr. Frede said in part "The protection of human society, which is the leading idea in combating crime, demands a general reform of the prison organizations for the following reasons:

In spite of what history taught us, prisons have been allowed to become high schools for crime and criminals; the deterrent methods of combating crime have proved worthless; the whole mental atmosphere of the prisons must be influenced by the idea of education; the exterior and interior organizations of our prisons must both be made subservient to this aim; and we must return to the principle of training prisoners to work by work."

Dr. Frede pointed out that the critical moment of a prisoner's discharge suggests the idea of our duties toward him and toward society. "The necessity and the difficulty of finding work for him" he said, "are the chief objects of consideration for our existing prison societies."

Sir Maurice Craig, of London, M.B.E., M.D., F.R.C.P., chairman of the National Council for Mental Hygiene of Great Britain, spoke on "A Present Day Conception of Mental Disorders," and said in part, "In the past, no attempts were made to prevent insanity. That attitude permitted many persons to reach the final condition of mental illness which might have been prevented with treatment. Now it has led us to consider the whole subject of mental disorder from the standpoint of prevention rather than of treatment. From the medical standpoint, there is no fundamental difference between physical and mental disorder. The same stress will lead to a bodily illness in one individual and the disturbance of the mind in another. We see them regarded, however, as entirely different in nature, one in its early stages being treated and the other neglected. One of the aims of the National Council for Mental Hygiene of Great Britain is that this arbitrary and illogical distinction shall give way to a more enlightened understanding."

BOOK REVIEWS

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

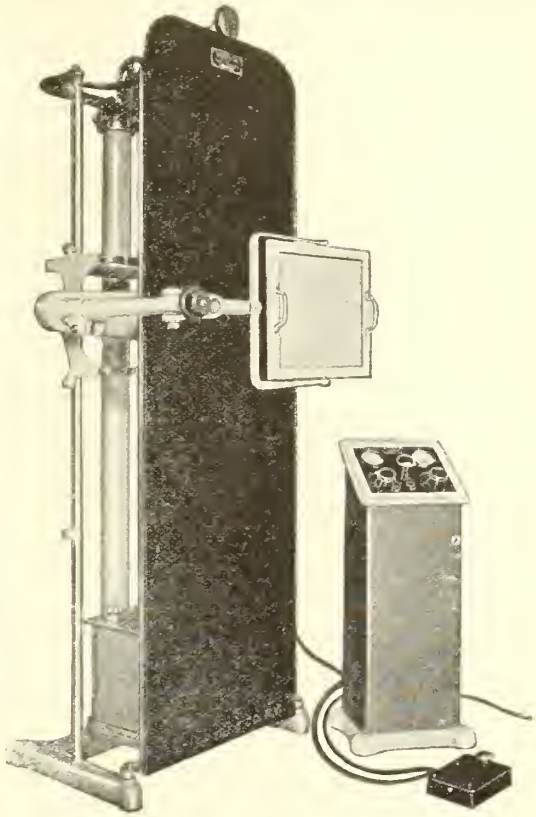
OBSTETRICS FOR NURSES. By Joseph B. DeLee, M.D., Professor of Obstetrics and Gynecology, University of Chicago, School of Medicine; Obstetrician to the Chicago Lying-In Hospital and Dispensary. New (9th) edition, revised. 12mo of 645 pages, with 269 illustrations. Philadelphia and London: W. B. Saunders Company, 1930. Cloth, $3.00 net.

In the preface to this, the ninth edition, the author states: "Emphasis has been placed on the care of confinement at the home of the patient, as still a large amount of home obstetrics is being done."

If the fetal and maternal morbidity and mortality is to be decreased, the physician in attendance upon the lying-in, must practice better obstetrics. He must know obstetric nursing. We urge the physician to place this book on his shelves for daily reference. Surely no nurse should be without a copy.

The chapter on the all-important subject of infant feeding has been completely rewritten.

(Concluded on page xviii.)



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BOOK REVIEWS

(Concluded from page 720.)

GYNECOLOGY FOR NURSES. By George Gellhorn, M.D., F.A.C.S., Professor of Gynecology and Obstetrics and Director of the Department, St. Louis University, School of Medicine, St. Louis, Mo. 12mo of 275 pages with 145 illlustrations. Philadelphia and London: W. B. Saunders Company, 1930. Cloth, $2.00 net.

A well-written book that cleverly avoids minute details. To write down to your readers is always a difficult task but this is well done. One might differ as to what to omit in some places. Why omit granuloma inguinale when mentioning chancroids, or abdominal pregnancy in discussing extra-uterine pregnancy?

The lurid, old-time picture of the accidents to tubal pregnancy seems out of place.

Intravenous transfusion before operation, in case of hemorrhage, is not generally approved. Occurrence of pain in ectopy does not mean death of the fetus any more than vaginal bleeding does and neither symptom will satisfy the teaching of the Catholic Church.

The chapters on "What a Nurse Should Know" are most commendable.

SURGICAL DIAGNOSIS, VOLUME III and SEPARATE INDEX VOLUME, completing the new work by 42 American authors. Edited by Evarts Ambrose Graham, M.D., Professor of Surgery, Washington University Medical School. Three octavo volumes, totalling 2750 pages, containing 1250 illustrations, and Separate Index Volume. Philadelphia and London: W. B. Saunders Company, 1930. Cloth, $35.00 a set.

The editor and his fourteen collaborators on Volume 3 have produced a work comparable in its value to Volume 1. In addition to diagnosis, questions of etiology and pathology have been discussed where understanding of the same renders diagnosis easier: certain subjects, such as syphilis, tuberculosis, etc., are not treated exhaustively but only those aspects stressed which are of particular interest from the standpoint of diagnosis. Also, little attention is given to the detailed description of the various necessary laboratory tests, matters rightly belonging in textbooks for that purpose. Voluminous references to the literature have purposely been omitted. To this end strictly clinical phases of diagnosis have been emphasized but not to the exclusion of those methods of laboratory examination which are a distinct addition in reaching not a "snap" diagnosis but an accurate as well as a correct one. With this idea uppermost the atypical and the typical picture of a disease is portrayed. Only occasionally are treatment principles mentioned.

The book is delightfully presented, is thoroughly up to date, and is a credit to its worthy contributors.

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(Concluded on page xx.)

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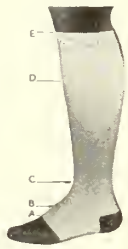

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(Concluded from page xviii.)

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PHYSICAL THERAPY IN DERMATOLOGY*

CARROLL S. WRIGHT, M.D.
PHILADELPHIA, PA.

What a contrast there is in the equipment of the dermatologist of the twentieth century with that of the dermatologist of the nineteenth century! With the development of electricity, new apparatus is being continually devised to aid in dermatologic therapeutics, with the result that physical agents have become an important part of the dermatologist's therapeutic armamentarium. Five years ago, on reviewing his office records, Chipman found that forty-seven per cent of all his private cases received electric treatment in some form or other. When we consider that there is an increasing use of electric therapy, and add to the electric physical therapeutic measures, radium therapy and carbon dioxid snow, this percentage would undoubtedly be very much higher.

The following are the chief physical agents used in dermatologic therapy: (1) roentgen rays; (2) radium; (3) Grenz rays; (4) ultraviolet rays; (5) endothermy; (6) galvanic current; and (7) carbon dioxid snow.

ROENTGEN RAYS

It is generally admitted that the roentgen rays constitute the most useful and successful single remedy in the treatment of skin diseases. X-rays are superior to radium in that they save time and expense and can be employed for the treatment of diseases that cover extensive surfaces. McKee and Andrews have listed more than eighty dermatoses that are amenable to x-ray therapy. The list is too long to include in this paper, but special mention will be made of a few conditions in which roentgen rays are of particular value, namely: acne vulgaris, localized eczema, psoriasis, tinea of hairy regions, and epithelioma.

Acne Vulgaris.—No other form of therapy has given as good and comparatively rapid results as have the roentgen rays in the treatment of acne. One-quarter skin unit doses, weekly for ten to twelve weeks, are necessary for the average case, although some cases may be cured by a very few applications. Claim has been made that x-rays will in some instances result in too rapid a healing of the pustular lesions in acne with the result that the individual pits are deeper, through inability to fill in properly with new tissue. This is not the case when small doses of soft rays are employed. To offset such possible effect Traube suggested the use on each alternate week of the ultraviolet rays, with which disappearance of lesions is less rapid but, in Traube's opinion, accompanied by a better cosmetic result.

Other measures, both local and dietary, are necessary to obtain the best results in the treatment of acne and the attention of the physician who would treat acne should be directed to these other measures, and not permit them to be lost sight of in his enthusiasm over x-ray therapy.

Eczema and Psoriasis.—For the most part it is advisable to limit the use of x-rays in these two conditions to localized patches, patches on exposed surfaces which are unsightly, or persistent patches that resist other methods of therapy. patients with this tendency the dangers of cumuticularly psoriasis, are apt to become x-ray addicts because of the ease and rapidity with which they are often helped. It is well to explain to patients with this tendency the dangers of cumlative effects, so that a refusal to treat them beyond the limits of safety will not result in their seeking further and perhaps falling into the hands of quacks or the unscrupulous.

Tinea of the Hairy Regions.—The x-ray is still the paramount remedy for depilating hairy regions affected by ringworm or favus, thallium having proved of value only in children between very limited ages and even then often giving rise to toxic effects.

Epithelioma.—The x-ray alone may cause the disappearance of a basal cell epithelioma and may be used alone when surgery, cautery, or endothermy would leave an unsightly scar, but in most cases a combination of electrocoagulation and roentgenotherapy is preferable. This is certainly true in the prickle-cell type of lesion. Best results are usually obtained in the

* Read before the Section on Dermatology, Erie Session, October 1, 1929.

latter type of lesion by a combination of removal with the endotherm knife followed by erythema doses of x-ray, preferably filtered, to the site of destruction and to the neighboring glands. If the roentgen rays alone are employed in the treatment of basal cell epithelioma, a heavy dose of from 1½ to 2 units* unfiltered should be given, followed by a three weeks' rest, and then repeated if necessary.

According to Barcat, the roentgen rays exercise a remarkable calming power on cutaneous nerves relieving congestion, pruritus, trophic disturbances, without risk provided the dosage is proper. For this reason he advises the use of the rays over the spinal column in lichen planus, urticaria, and general pruritus. The method of treating lichen planus by irradiation over the spinal column as suggested by Gonin and Bienvenue has aroused considerable interest. Gonin and Bienvenue employ unfiltered treatment with the tube placed over the fourth dorsal vertebra, giving a dose of five Holzknecht units. Louste, Levy-Fränkel, and Jouster and Pautrier found the method of value but recommended filtered ray. Recently, the writer treated a patient who had lichen planus, a woman of fifty. New lesions continued to develop rapidly in spite of the usual therapeutic procedures used in lichen planus, but there was disappearance of the intense pruritus after a single treatment over the lumbar vertebræ and disappearance of the eruption after the third treatment. In some other cases the value of the method has been less definite. Bisson and Desaux have found this indirect therapy to be of value in cases of pruritus of unknown or nervous origin, and, according to l 'Homme and Nicolle, x-ray over the involved spinal nerve root is beneficial in cases of herpes zoster. The use of x-ray therapy over the root of the affected nerve in zoster has been employed for years by Dr. Jay F. Schamberg and the writer, who have found it helpful in lessening the pain and shortening the attacks in a large percentage of cases.

It is unfortunate that one cannot speak of x-ray therapy without sounding a warning, but it is an agent the abuse of which may do much harm. Its value as a therapeutic agent is beyond question, but unfortunately all those who employ roentgen therapy are not properly skilled in the technic of treating the skin or perhaps do not wish to recognize its limitations. Dermatologists the country over see an increasing number of instances of atrophy and telangiectasis as a result of a method of removing superfluous hair widely advertised to the lay public and which consists in the use of an agent none other than the x-ray. Coöperation of the medical fraternity is necessary in fighting this evil.

* By a unit is understood the McKee skin unit which is expressed mathematically as follows:

$$\frac{\text{time} \times \text{milliamperes} \times \text{spark gap}}{\text{distance squared}} \quad \text{or} \quad \frac{2 \times 3 \times 6}{8 \times 8} = \frac{36}{64}$$

Radium

According to Taussig, there are several dermatologic diseases for which radium is the method of choice. It has been particularly successful in the treatment of neoplasms. Radium may be used with success in the treatment of the following: epithelioma; sarcoid; hyperkeratosis: clavus, callositas, verruca plantaris, leukoplakia, and senile keratoses; vascular nevi; hypertrophies: keloid, and hypertrophic scars.

In the time allotted it is impossible to enter into the question of technic and dosage of using radium in these various conditions. To have either a full strength or half strength flat glazed placque in one's therapeutic equipment is to possess an agent that may not be used often, but may prove of great value in the above-named conditions, but as in the case of x-ray, one should possess a thorough knowledge of all the factors of dosage and a knowledge of the dosage indicated for each of these conditions. Radium has proved of great value in the treatment of epitheliomas of the superficial basal cell type, if the location is such that destruction by electrofulguration or surgical intervention would leave an unsightly scar. In angioma cavernosum and the slightly elevated strawberry marks often seen in infants, radium will give excellent cosmetic results, but it should not be used in the flat, port-wine mark.

Like the x-ray, radium is a dangerous modality in unskilled hands. McKee warns that the physician who employs either of these agents should possess in addition to equipment a knowledge of their nature, biologic and therapeutic action, and a technical training.

Grenz Rays

During recent years, Bucky has investigated the physical and biologic properties of a range of wavelengths between the ultraviolet and roentgen rays because of the assumption that such waves might have biologic effects which in some ways would be similar to roentgen rays and on the other hand to the ultraviolet rays, and the combination of these effects might give new possibilities. The Grenz rays are similar to the roentgen rays in that they produce an erythema and pigmentation and have an accumulation from successive treatments. The penetration of the Grenz rays is much less than that of the roentgen rays. So far atrophy and telan-

giectasis have not been observed following large doses.

Eller and Bucky studied the effects of these rays in a number of dermatoses and found a favorable effect in acne vulgaris, dermatophytosis, epithelioma, eczema, lichen planus, leukoplakia, rosacea, and verruca vulgaris. Further study is necessary to evaluate these rays.

Ultraviolet Rays

Ultraviolet light therapy is far less valuable in dermatologic practice than roentgen therapy and less valuable than one might be led to believe by the literature which is freely distributed among physicians by manufacturers of the various lamps. Undoubtedly ultraviolet rays are of value in the treatment of a certain few diseases of the skin, but a review of the literature reveals more pessimism than optimism as to their value. Some European dermatologists believe that lupus vulgaris is not really cured by unaided light therapy although this is the dermatosis for which light therapy is particularly recommended. The conditions in which local use of the ultraviolet rays are helpful should be limited to the following: tuberculosis of the skin; acne; alopecia areata; and psoriasis.

The Finsen light is the best apparatus devised for the treatment of tuberculosis of the skin and remarkable results are being reported by Reyn at the Finsen Institute. Reyn prefers the carbon arc light because its spectrum more nearly approaches that of sunlight.

Although a marked exfoliation can be produced by either the Kromayer or Alpine light in the treatment of acne vulgaris, the results are neither as definite or as lasting as those obtained when x-rays are employed. Dore believes that equally good results may be obtained by using strong keratolytic applications.

That the ultraviolet rays hasten the return of hair in alopecia areata is generally agreed. Louste and Jouster obtained the best results from the use of the pressure lens. Very few dermatologists have any faith in the ability of the ultraviolet rays to promote hair growth in cases of premature alopecia, although in cases of defluvium following an illness the rays may have a marked restorative action.

As a rule good results are not observed in the treatment of psoriasis even though we know that direct sunlight has a markedly beneficial action in many cases. Goeckerman's special technic is sometimes effective. It consists in the nightly rubbing of the patches with crude coal tar ointment, removal of the ointment with oil the following day, and then application of the ultraviolet rays. Daily repetition of this procedure is necessary, and the messiness of the application and amount of time consumed make the treatment difficult in private practice.

One of the greatest benefits conferred by the ultraviolet rays is their tonic action. They may be used in this way with happy results in the treatment of certain dermatoses in which improvement in the general condition of the patient is necessary to bring about cure.

Endothermy

Within the past few years endothermy has developed into a useful and increasingly popular method of treatment for certain conditions of the skin. I refer particularly to electrodesiccation and electrofulguration. Once the technic of this instrument is mastered its value cannot be questioned. The monopolar current may be adjusted to produce a spark fine enough to remove the most superficial ephelis, or a spark sufficiently strong to destroy a fair-sized growth. The bipolar current is particularly valuable, but one should spend considerable time learning how to gauge its action. The bipolar current may be successfully employed in the treatment of such varied conditions as spider nevi, juvenile warts, verruca vulgaris, acne pustules, small steatomata, mucoceles, telangiectasis, molluscum contagiosum, nevus verrucosus, adenoma sebaceum, etc. It is my opinion that the lesion produced by the bipolar current is less painful and heals more rapidly than that produced by the monopolar current. The bipolar current used for the radio knife is particularly useful in removing deep-seated growths such as large epitheliomas, but careful control over the cutting point is requisite.

Diathermy is also useful. Leszynski reports excellent results from diathermy of the thymus in seven of eight cases of psoriasis and considered it a much better method of stimulating the thymus than roentgen ray therapy. Hunter was able to cause the cessation of furuncles in the auditory canals, after they had recurred for three years, by the application of diathermy to the ears.

Galvanic Current

The galvanic current may be applied either directly or indirectly. Jeanselme, Bourguignon, and Lucas used the direct method in the treatment of scleroderma, placing a negative electrode soaked in a one per cent solution of potassium iodid on the lesion and a positive electrode soaked in water near, and passing current through the patch. Direct application is also used when the electrolytic action is desired as in the destruction of hairs, nevi, etc. Indirectly, the galvanic current is used for generating heat for the gal-

vanocautery—an extremely useful instrument in dermatology. Galvanocautery is still an excellent agent for removing verrucæ, nevi, molluscum contagiosum, keratoses, and superficial epitheliomas, there being no bleeding, little or no chance of infection, no after-treatment, and little or no scarring.

For removing superfluous hair electrolysis is still the treatment par excellence.

The late Dr. G. Betton Massey stated, shortly before his death, that in his opinion the galvanic current constituted the best treatment for port-wine marks. He used an electrode with half a dozen needles mounted in brass, with a hard rubber sleeve to limit their penetration, inserting these needle tips into the nevus and using a current of from one to two milliamperes per needle. This was repeated in a different area in several weeks.

Carbon Dioxid Snow

Carbon dioxid snow still serves as a very valuable agent in dermatology and one that has stood the test of time. It is valuable in the treatment of nevus vasculosus or strawberry mark, an erythematous angioma slightly elevated above the skin. These are often cured by from one to three applications of from thirty to forty-five seconds under moderate pressure. Light pressure from five to fifteen seconds will readily remove flat pigmentations. It is still of value in the treatment of discoid lupus erythematosus.

Lortat-Jacob has described a new method of applying snow which he calls cryotherapy. The gas is collected in an invention of his own and the snow forms in a copper chamber, which chamber is applied directly to the lesion. Only the metal comes into contact with the skin. The apparatus has the distinct advantage of having a spring gauge which accurately controls pressure—a factor that is difficult to estimate accurately when snow is applied directly.

Comment

The future will undoubtedly see the development of many more physical agents which will aid in dermatologic therapeutics, and it is to be hoped that this will be so. Indeed at present there is considerable interest in England in a new type of steam cautery devised by Sautter but which, to the best of my knowledge, has not been used in this country. The writer has endeavored to show that these physical agents are valuable aids to good therapeusis, provided their indications are thoroughly understood and the technic of their use is thoroughly mastered. He wishes, however, to emphasize also that the indiscriminate use of these agents is to be decried, particularly x-ray and radium, the misapplication of either of which may not only do no good but do actual harm. The galvanocautery might safely be a part of every physician's equipment, and this is also true of the ultraviolet ray lamp, but only those who have had special training in their use should employ the other physical agents in the treatment of dermatoses.

1402 Spruce Street.

ABSTRACT OF DISCUSSION

Udo J. Wile, M.D. (Ann Arbor, Mich.): It was good to hear Dr. Wright and to note the very conservative measure of his paper, after setting forth all the mechanisms which we have at our disposal in our therapeutic armamentarium.

Having been brought up by a very old-fashioned dermatologist, and seeing the electric mechanisms in our offices, I am more convinced that we are perhaps overdoing the treatment of cutaneous disease with physical agents at the expense of time-honored remedies. Perhaps one of the greatest therapeutists that the world has ever seen, at least in dermatology, was Oscar Lassar, not excepting the late Unna. Neither of these men, so far as is known, ever used an x-ray machine. They were both extraordinarily skilled in the use of pharmacologic agents in the treatment of cutaneous disease. Lassar cured more patients with water and soap and the use of hydrotherapy than many of us cure with far more intricate means.

To what extent we are influenced by commercial electric apparatus manufacturers is a question which might properly be considered. It is always a very fascinating display, that we see at our medical meetings, of new and impressive mechanical contrivances for either the generation of heat or electric current, or in some form of electrotherapy which impresses itself not only on us, but also to a certain extent on our patients.

Now, the x-ray, as Dr. Wright has said, has perhaps justified itself more than any other physical agent which we have; and yet, how many of us know that the x-ray is perhaps most successful in the treatment of such things as lichenification, thickened lichenified patches, and that just as good results can be accomplished by the use of diluted acetic acid followed by alkali, and then the application of arsenic trisulphid ointment in forty or fifty per cent strength, or even pure. That was the treatment of all lichenified areas up to the time the x-ray came into use. This treatment was first employed by Lacy, and it is still in use very largely in the German countries. We should not forget that acetic acid and all the derivatives of the long hydrocarbons are extraordinarily useful, and as Dr. Wright has pointed out, a successful large practice can be carried on with a comprehensive knowledge of pharmacology, a prescription pad, and lastly, the electrocautery.

If a single therapeutic physical agent had to be selected, the electrocautery should be the one preferred to the x-ray or radium or even the more recent dry forms of cauterization which are in use today.

William H. Guy, M.D. (Pittsburgh, Pa.): The mechanistic era in dermatology has been of concern to us for some time. The use of mechanical therapy without proper grounding in diagnosis and an understanding of underlying pathology in certain dermatoses can lead only to disaster.

One will obtain an x-ray machine and an ultraviolet light and, without any idea of their applicability to

dermatologic pathology, immediately start in treating all sorts of cutaneous manifestations.

A question asked prior to the meeting exemplifies this point: "What sort of a light should a man have for treatment of cutaneous diseases?" The answer to such a question is, of course, extremely difficult, because differential diagnosis, the type of cutaneous malady likely to respond to a particular light, and a knowledge of its contraindications and limitations is essential and further no one method of therapeutic approach can be successful.

Advances made in mechanical therapy are of the utmost value and the x-ray, particularly, is the most valuable single therapeutic agent in modern dermatology. At the same time, an understanding of basic pharmacology is necessary, and furthermore, the relationship of cutaneous medicine and internal medicine is essential to the successful therapy of a fair percentage of the cases we meet in our daily practice.

Dr. Wright (in closing): My answer to the question asked Dr. Guy, concerning what light to use in dermatology, would have been, "Daylight!"

THE TREATMENT OF PULMONARY SUPPURATION*†

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The term nontuberculous pulmonary suppuration has been applied to a variety of pathologic changes not infrequently of diverse etiology. There is little excuse for the use of this term except as a tentative designation for a group of diseases, the separation of which is essential in treatment. The group includes the pulmonary suppurative changes resulting from an aspirated foreign body, pulmonary abscess following acute respiratory-tract infection, and surgical operation, especially on the upper respiratory tract, abscess secondary to bronchopulmonary new growths, bronchiectasis, and a miscellaneous group, e. g., the pulmonary suppurative lesions which result from the extension of suppuration of the pleura and mediastinum. Bronchial obstruction from any cause tends to favor the occurrence of abscess and bronchiectasis, both of which lesions, in varying predominance, may be present in the same patient.

The three diagnostic problems which patients with evidences of pulmonary suppuration present are: (1) What is the lesion—is it a diffuse purulent pneumonia, is it an abscess, is it a bronchiectasis? (2) Where is it located? (3) What is the cause? The answers require a careful study of the history; the onset, duration, and character of the symptoms; a careful physical examination; repeated study of the sputum; expert roentgenologic examination; bronchoscopy; and in selected cases, pneumography. The answers may be difficult to obtain but effective treatment depends in a very large measure upon them.

Pulmonary Abscess

The three principal methods of the treatment are medical, bronchoscopic, and surgical, used singly when indicated, or as is more often necessary, in combination.

Medical treatment comprises rest, symptomatic care, attention to the diet, and measures to improve the general condition of the patient. Caution is necessary in the administration of cough sedatives which favor stagnation of secretions, a factor in prolonging suppuration to a chronic or fatal issue. The use of neoarsphenamin in spirochetal infection, and vaccine therapy will be discussed later. Postural drainage is important as a supplement to bronchoscopic drainage. Small blood transfusions are of value in patients with marked secondary anemia, especially in the preparation for operation and in the after care of those treated surgically. Medical treatment alone is indicated in the early acute phase of pyogenic infections before abscess formation has occurred. After the abscess has formed, free drainage is essential to recovery and this seldom occurs without the aid of bronchoscopy or external operation. The earlier free drainage is established, the better are the chances of recovery.

Bronchoscopy, apart from its value as a diagnostic procedure preliminary to treatment, is of first importance in pulmonary suppuration caused by foreign body. It is also of value in non-foreign body suppuration of recent origin, such as posttonsillectomic abscess, if the lesion is in communication with the air passages. Bronchoscopy permits of direct aspiration of pus and the removal of obstructing secretions and granulations. It aids not only the overtaxed mechanisms of cough and ciliary action, by which secretions are naturally removed, but frees the air passages from obstructions to the exit of pus. Bronchoscopy may reveal an unsuspected foreign body or a bronchial neoplasm as primary factors in the causation of abscess. Bronchoscopy is contra-indicated in the presence of a purulent pneumonitis, or if the abscess extends to the periphery and there is danger of rupture into the pleura. Bronchoscopy renders postural drainage more effective, the former may be done once or twice a week, or oftener if necessary; the latter two, three, or four times daily, as the patient's general condition permits.

Surgical drainage, or external operation, is indicated if the pulmonary abscess does not drain satisfactorily through the air passages, is tending to point toward the pleura, or actually involves

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† From the Department of Medicine, Jefferson Medical College and Hospital, Philadelphia.

the pleura. In general it is adequate to treat patients with pulmonary abscess conservatively, including bronchoscopy, unless surgery is definitely indicated at the time the patient comes under observation. The possible advantage of surgery is considered in every patient, but many may be spared the external operation by careful bronchoscopic treatment. Conservative measures may prepare the patient for surgical intervention, but, on the other hand, the disease should not be allowed to go on indefinitely until fibrosis and bronchiectasis occur and render the ultimate surgical intervention difficult and unsatisfactory.

Artificial pneumothorax has been recommended but it is both unsatisfactory and dangerous. Since the principal object of therapy in pulmonary abscess is to secure adequate drainage, it is difficult to understand the rationale of treatment by induced pneumothorax. In tuberculosis, rest and immobilization of the lung is a primary consideration; while in abscess, drainage is the sine qua non to recovery. Whittemore and Balboni report that among 18 patients with pulmonary abscess treated by this method, 2 were completely cured; 2 were temporarily improved; 3 died from hemorrhage of the lung during treatment; and 5 developed empyema, of which 1 died.

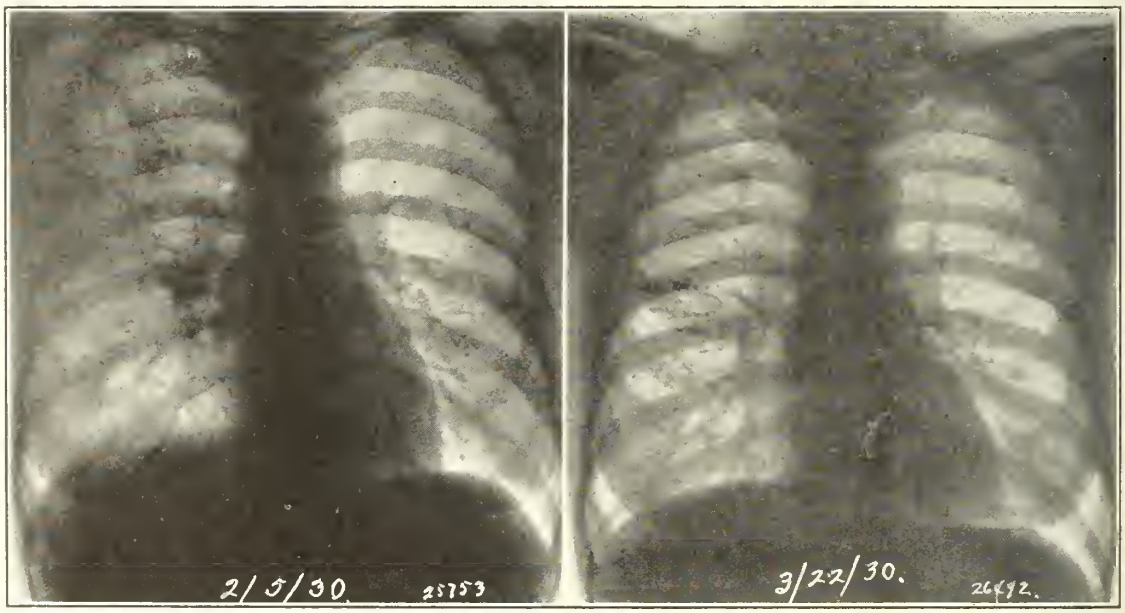

Fig. 1 (a)
Posttonsillectomic pulmonary abscess of the right upper lobe in a female patient aged 34 years.

Fig. 1 (b)
Roentgenogram of same patient after complete recovery following bronchoscopic treatment by Dr. L. H. Clerf. (Roentgenographic studies by Drs. W. F. Manges and J. T. Farrell, Jr.)

Carcinomatous Pulmonary Abscess

Primary malignant disease of the lung, which we now recognize more frequently than formerly, may manifest itself with the symptoms and signs of abscess. While carcinomatous abscess may be suspected in patients, especially males over thirty years of age, if the history reveals no known cause for the abscess, the neoplastic origin of the abscess may be entirely unsuspected until a bronchoscopic study has been made. The importance of bronchoscopy may be exemplified by the brief reference to two patients. A male, aged thirty-six years, had noticed a cough with scant purulent expectoration, increasing weakness, and loss of weight following a tonsillectomy five months before coming under observation. The physical signs and roentgen-ray findings were not unlike those of an abscess in the lower lobe of the right lung. Bronchoscopy revealed a primary bronchial new growth. Roentgen-ray treatments were given, with temporary improvement; the patient subsequently developed metastases to the bones and other organs. The second patient, an adult male, aged fifty years, had been ill for one year with a cough, purulent expectoration, fever, weakness, and loss of weight. The physical signs and roentgen-ray findings indicated a large abscess in the left upper lobe near the chest wall. Surgical incision seemed so definitely indicated that a bronchoscopy was not done. At operation, Dr. John Flick found a large carcinomatous abscess. The patient subsequently died and at necropsy the bronchial origin of the carcinoma was demonstrable. A preoperative diagnostic bronchoscopy and palliative bronchoscopic drainage might

spare this type of patient the extensive operation which a noncarcinomatous abscess may require.

Pulmonary Suppuration Caused By an Aspirated Foreign Body

Pulmonary suppuration and abscess formation caused by the lodgment of a foreign body offers a very favorable prognosis when the cause is recognized and removed. That a pulmonary abscess produced by a foreign body may be overlooked for a long period of time is strikingly exemplified by the following: A man aged 29 years had been wounded in the jaw during the World War but the lodgment of the bullet was not recognized. There was no penetrating wound of the chest. The fractured jaw healed, but recovery was followed by cough, expectoration, wheezing, and pain in the left chest. Bronchitis, tuberculosis, and abscess were diagnosed and a period of five years elapsed before the unsuspected foreign body was demonstrated by roentgen-ray examination. It was assumed that the foreign body fell into the bronchus at the time of the original jaw wound. Recovery from the chronic lung abscess followed bronchoscopic removal of the foreign body by Dr. Chevalier Jackson.

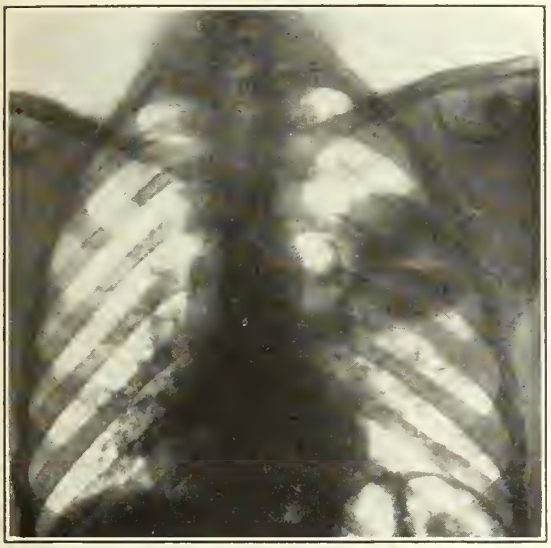

Fig. 2 (a)
Pulmonary abscess involving left upper lobe. Roentgen-ray picture before operation.

Fig. 2 (b)
Roentgen-ray picture after operation by Dr. John B. Flick. Complete recovery. (Roentgen studies by Drs. W. F. Manges and J. T. Farrell, Jr.)

Pulmonary Abscess not Associated with Demonstrable Foreign Body or New Growth

There is a large group of patients in which pulmonary abscess is not due to the aspiration of a demonstrable foreign body or associated with new growth. The etiology in this group varies and in a recent study of 172 cases, Flick, Clerf, Farrell, and the writer found it convenient to classify the causes under three headings: (1) following acute respiratory tract infection (25 per cent); (2) following surgical operation (70 per cent), principally tonsillectomy, and oral operations (62 per cent); and (3), miscellaneous, including undeterminable causes (5 per cent). The symptomatology of the postoperative and nonoperative groups did not vary materially, and the principal problem therapeutically involved the selection in a given case of the best method of treatment. Under the old expectant form of treatment, that is medical treatment alone, the prognosis as a rule is unfavorable. Dr. F. T. Lord, of Boston, concludes from an extensive experience, that under medical treatment alone recovery occurs in about 11 per cent, and incomplete recovery in about 15 per cent of the patients. In recent years, the bronchoscopist and the surgeon have done much to lower the mortality rate. The following statistics of Drs. L. H. Clerf and J. B. Flick are from the Jackson Bronchoscopic Clinic and the Gibbon Surgical Clinic of the Jefferson Hospital:

Results of Bronchoscopic Treatment in 121 Cases

Well	66	(54%)
Improved	16	(13%)
No improvement	8	(6%)
Referred to surgeon	28	(23%)
Died	3	(2.4%)

Results of Surgical Treatment in 29 Cases

Complete recovery	9	41.3%	Returned to work
Recovery with bronchial fistula	3		
Still under treatment	6		
Unimproved	1		
Deaths	10	(34.4%)	
Recurrences	2		

Bronchiectasis

The treatment of this condition is often extremely discouraging, especially when well marked, bilateral, and of long duration. From the point of view of treatment the cases encountered may be classified into two main groups: (1) obstructive and (2) nonobstructive.

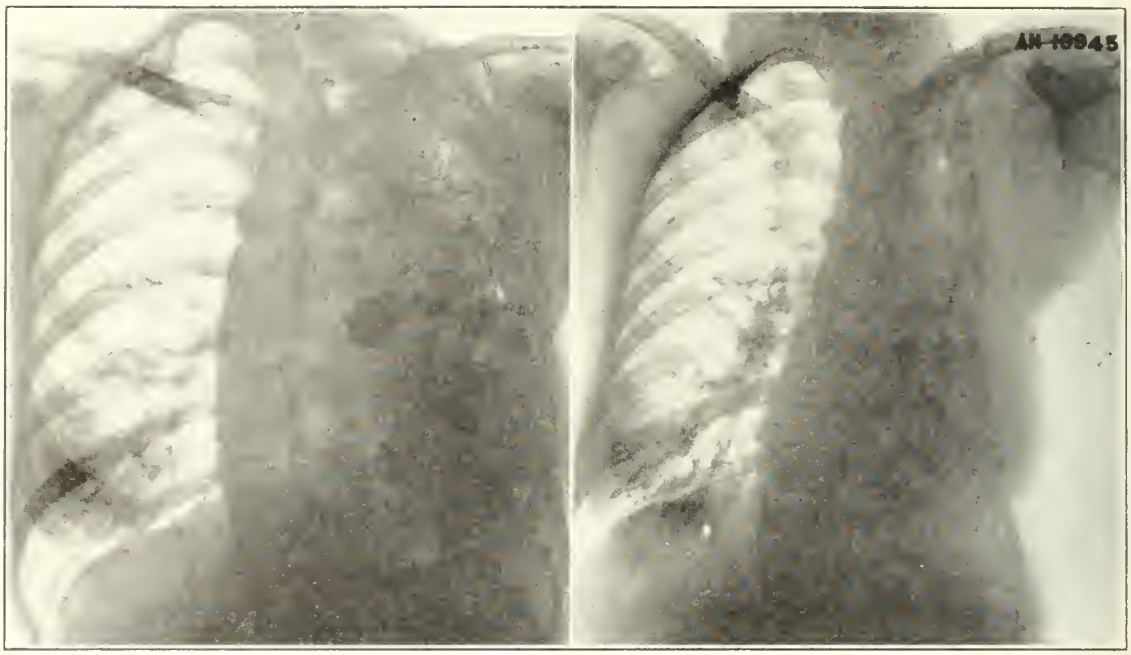

Fig. 3 (a)

Extensive unilateral bronchiectasis involving the left lung, and especially marked in the lower lobe. The bronchiectatic cavities are visualized by lipiodol which was injected bronchoscopically immediately before the roentgenogram was made.

Fig. 3 (b)

Roentgenogram of same patient after extrapleural thoracoplasty by Dr. John B. Flick. The bronchiectatic dilatations, as shown by lipiodol, are much smaller. Clinically the patient has completely recovered except for a slight nonproducive cough. Previous to operation the cough was annoying and productive of a large quantity of fetid sputum. (Roentgenographic studies by Drs. W. F. Manges and J. T. Farrell, Jr.)

The first group includes those cases in which the bronchiectasis results from, or is associated with, bronchial obstruction, e. g., foreign body, new growth, pressure by tumor or aneurysm, cicatricial stenosis, inspissated secretions, exuberant granulation tissue, etc.

Bronchoscopy, except in aneurysm, should be used whenever bronchiectasis is suspected, in order to determine the presence and character of the obstruction, and the possibility of removing the obstruction. Foreign bodies, exuberant granulations, cicatricial stenosis, and the stagnation of the accumulated secretions are amenable to bronchoscopic treatment. In nonobstructive bronchiectasis, bronchoscopy aids principally by relieving the overtaxed mechanisms of cough and ciliary action by which secretions are naturally removed. Obviously this procedure cannot influence permanently dilated bronchi or correct certain extrabronchial factors such as the traction on the bronchial wall, which occurs in bronchiectasis associated with pulmonary fibrosis. Bronchoscopy can, however, relieve the stagnation of secretions which is an important factor in aggravating the bronchiectasis.

Collapse therapy, including artificial pneumothorax, phrenic paralysis, and thoracoplasty, is to be considered in the nonobstructive types of bronchiectasis. Obviously these procedures are useful only in unilateral or predominantly unilateral cases. The simplest is *artificial pneumothorax,* and, if this is possible by reason of a free pleura, it is worthy of a trial, especially in children and young adults in whom, not infrequently a temporary pulmonary collapse causes improvement and an apparent arrest of the disease. In adults, pleural adhesions and pulmonary fibrosis commonly interfere with satisfactory collapse from artificial pneumothorax. Compression pneumothorax, or the introduction of air under a positive pressure, is a dangerous procedure. I have seen several patients in whom compression pneumothorax was attempted, pleural adhesions were torn, and pyopneumothorax resulted. If the bronchiectasis is basal, *phrenic exeresis* should be considered. This is a simple procedure in the hands of the surgeon and if it does not benefit the patient, it is my experience that it does no harm. It may be used in conjunction with pneumothorax, especially when diaphragmatic adhesions apparently

interfere with adequate pulmonary collapse. If these procedures fail, or if the unilateral disease is marked, one of the major surgical procedures should be considered. It is in the selection of the type of operation that special experience and skill in thoracic surgery are required. *Thoracoplasty* has definite limitations but in one instance its selection by my colleague, Dr. John Flick, resulted in a remarkable improvement of the patient. Other surgical procedures are simple lobectomy, cautery lobectomy, and drainage of large cavities. My observation, as an internist, of the influence of these various procedures has been too limited to express an opinion at this time.

When advanced bilateral bronchiectasis is present, none of the collapse methods is suitable, unless the one side has advanced disease and the other relatively slight involvement. Palliative treatment utilizing bronchoscopic and postural drainage combined with hygienic-dietetic care must be relied upon to make patients with hopelessly advanced bronchiectasis comfortable. The medical treatment, as outlined in the early part of this paper, is useful. Neoarsphenamin for spirochetal infections, and vaccines, especially autogenous vaccines made from bronchoscopically removed secretions, are useful.

In recent years, the recognition of the etiologic relationship of chronic focal infections in the upper respiratory tract to lower respiratory-tract diseases suggests not only an important method of preventing bronchiectasis in some patients, but of lessening or ameliorating the symptoms once they have occurred. The clearing of focal infections, and especially of paranasal sinusitis, is most helpful, especially in the early stages of bronchiectasis.

Finally, the maximum of benefit in the treatment of patients with pulmonary suppuration can be secured only by a close coöperation of internist, roentgenologist, bronchoscopist, and surgeon.

269 South 19th Street.

SURGICAL TREATMENT OF PULMONARY TUBERCULOSIS*

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The importance of pulmonary tuberculosis as a therapeutic problem is emphasized when it is considered that there are approximately one million persons sick with the disease in the United States, of whom ninety thousand die annually (a morbidity incidence of 0.9 per cent and a mortality rate of 0.1 per cent). In Pennsylvania, in 1928, there were registered 6012 deaths from pulmonary tuberculosis as compared with 11,257, in 1918. This marked decrease and similar reports from other states may be ascribed to (a) better methods of diagnosis and treatment by the medical profession; (b) improved living conditions of the people; (c) educational campaigns in the prevention and care of the disease. No small importance should be attached to a better and wider understanding of the value of the rest, exercise, dietetic, and fresh air régime. This has been and will continue to be the backbone of therapy leading to recovery, no matter what supplementary procedures may be used.

Surgical therapy for individuals who have not done well, though conservative measures have been conscientiously carried out, has been a fascinating field of endeavor for many years. Since Carson, in 1821, first proposed artificial pneumothorax, many operations have been tried, ranging from partial excision of the lung as done by Tuffier, in 1891, an idealistic, if not a practical, procedure; drainage of tuberculous cavities as suggested by DeCerenville in 1885, to those designed to rest the lung by localized or general compression. Collapse therapy in its various forms has stood the test of experience and has increasingly demonstrated its value. Methods of choice are: (1) artificial pneumothorax; (2) phrenicectomy; (3) extrapleural thoracoplasty; and (4), extrapleural pneumolysis.

Artificial pneumothorax, in which air is injected into the pleural cavity as a compression medium, is an ideal method because of comparative freedom from operative risk. Danger of pleural shock, if there be such an entity, is minimized by liberal anesthetization of the thoracic wall. Danger of embolism is avoided by taking care not to puncture the lung. The degree of collapse can be controlled. Compression can be applied gradually and withdrawn if need be. As the lung is allowed to expand, a certain amount of function will be restored.

In some cases, however, artificial pneumothorax fails because the lung reëxpands spontaneously as a result of pleuritis, before an arrest of activity has taken place. In our experience, this will happen as early as three months after injections have begun, or it may be delayed for six years. It is difficult to hold a complete collapse longer than two years.

In one group of cases it is not possible to introduce air at all because of the extensive pleural adhesions. In another group, because of bandlike adhesions, a portion of the lung is held to the thoracic wall and only a partial collapse is obtained. In this last group the bands may

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often be divided by an endothermic electric current through a Jacobæus thoracoscope without risk of hemorrhage, and a successful collapse accomplished.

Phrenicectomy is an operation which severs the continuity of the phrenic nerve, or preferably removes it as nearly as possible in its entirety. As a result of the ensuing paralysis of the hemidiaphragm, the pumping action of respiration is eliminated. The hemidiaphragm rises in the thorax and actual pressure is exerted against the superimposed lung, not only the adjacent lower lobe but the upper lobe as well, so that the scope of the operation as an independent procedure is considerably broadened.

Extrapleural thoracoplasty is the most radical operation. Sections of the ribs are removed subperiosteally from the first to the eleventh, inclusive, extrapleurally and paravertebrally, varying in length from an inch in the upper to six inches in the lower ribs. The severed ribs then assume a slanting position, and sag one to three spaces. The cut ends reunite in a few weeks' time and again fix the bony thorax. There is a lessening of the circumference of the hemithorax, but changes in the thoracic contour are not deforming with proper technic. There is likely to be a deepening of the supraclavicular fossæ; a slight drooping of the shoulder forward and inward; a pointing of the breast and nipple outward; a slight scoliosis with concavity to the opposite side. There is no interference with function of the upper extremity. Should the disease be limited to a small part of the lung, collapse may be undertaken for the upper or lower lobe, either by partial extrapleural thoracoplasty, or by *extrapleural pneumolysis*. In this operation some tissue, such as fat or muscle, is implanted between the thoracic wall and the lung.

Effects of collapse therapy upon the lung are notable. A reduction in volume which may reach sixty per cent, and a state of immobility are procured. There is a marked decrease in bronchial secretion; a marked diminution of blood supply to the lung tissue, caused by passive congestion and lymphatic stasis. This is a most important result inasmuch as lymph is a carrier of tubercle bacilli and toxins. The pathologic process which is produced is a fibrous tissue replacement which goes on slowly for a period of months. New tubercles are surrounded by giant cells; old ones are replaced by fibrous tissue; inflammation and ulceration are diminished; caseous material is calcified; cavities are reduced to mere clefts. The process has been aptly called a physiologic amputation of the lung. In the good lung, compensatory emphysema and increased motion develop.

Indications.—In general, collapse therapy is to be considered for all cases, which, after conscientious, conservative treatment in a sanatorium, are at a standstill or are losing ground so that the prognosis is bad.

Whether operative surgery such as thoracoplasty will be advantageous, or may be undertaken safely, depends upon two factors: (1) the general condition of the patient; and (2) the local character and extent of the lesion in the lungs. Surgery should not be undertaken for patients who are judged as poor surgical risks by the usual standards. It is contra-indicated if there is advanced systemic disease, for instance of the cardiorenal-vascular system, or grave constitutional disease, such as diabetes. Extensive tuberculous disease elsewhere is also a contra-indication. Surgery is likely to hasten death in those patients who show little resistance to tuberculosis, or who have a bad family history. Surgery should not be undertaken before adolescence or on elderly people. The best results are obtained with patients between the ages of eighteen and forty-five.

Considered from the standpoint of the character of the lesion of the lung, those patients will do best if the pathologic process is a long standing, slowly progressing, fibro-ulcerative type with cavitation and retraction. Acute miliary disease or caseous pneumonic tuberculosis does not respond. Considered from the standpoint of the extent of the lesion, those cases in which the disease is unilateral, are most favorable. The real problem is presented if there is bilateral involvement. Activity in the good lung is usually a contra-indication to thoracoplasty, though not necessarily to artificial pneumothorax or phrenicectomy. In a situation in which there is evidence in the good lung of a healed or non-active focus, it is almost impossible to predict whether this lesion will stand up under the strain thrown upon it by operation, without being activated. The operative test is the only method of determining what will happen. In making a decision, one is often guided by the judgment that the future holds nothing in store for the individual, from conservative treatment, and operation is undertaken, therefore, as a measure of last resort.

Procedure.—In our practice we are accustomed to try artificial pneumothorax. When this has failed or is not feasible we consider the advisability of a phrenicectomy. We have done this as an independent operation: (1) in cases with unilateral lesions essentially basilar; (2) in cases with unilateral widespread disease; (3)

if there is a predominance of pathology in the upper lobe; and (4), in several cases with extensive, bilateral tuberculosis, in the hope that reduction of the toxicity from the one lung may lead to the improvement of the other, or may fit the patient for a later thoracoplasty. The special indications have been to stop hemoptysis and compress cavities. As a preliminary step to thoracoplasty, phrenicectomy has been, with us, almost a routine procedure. In this rôle it has served to test out the availability of the patient for the more serious thoracoplasty, but not infallibly in our experience. Thoracoplasty, either partial or complete, is done in the more advanced, extensive cases in which a maximal and permanent collapse is desired and if there is a complicating empyema.

Results.—It has been my privilege in the past two years to have operated upon thirty-four patients who had pulmonary tuberculosis, referred largely by Dr. C. H. Marcy, director of the Tuberculosis League of Pittsburgh, and Drs. F. B. and R. W. Wilson, directors of the Beaver County Sanitorium. Phrenicectomy was done as an independent operation 15 times; in conjunction with a thoracoplasty 15 times. Thoracoplasty was done completely for 13 patients; partially, for 6 patients. The results are indicated in Table 1; the patients are classified as markedly improved, unimproved, and died.

Table 1

	Thoracoplasty 19 patients (13 with phrenicectomy)	*Phrenicectomy 15 patients*
Markedly improved	7	2
Improved	5	5
Unimproved	1	3
Died	6	1
Too recently done for classification		4

We have not felt justified to report any cures inasmuch as, at most, only a little over two years have elapsed since operation. Those designated as markedly improved are individuals in whom arrest of the pulmonary lesion is practically assured, and who will soon be able to return to a satisfactory economic status with earning capacity. Those classified as improved are symptomatically much better, as judged by the absence of fever, gain in weight, reduction in the amount of sputum and loss of tubercle bacilli, and an improvement in physical signs and x-ray appearance. Some of these will, in all likelihood, proceed to recovery.

There has been no immediate or operative mortality in either group. Subsequent to thoracoplasty, there have been six deaths. Four of these occurred within two months of the operation and were undoubtedly hastened by operative intervention. In two of these, both complicated by empyema, there were signs of reactivation of tuberculosis in the good lung; in a third, the lighting up of a general miliary tuberculosis; while the fourth died, so far as we could judge at postmortem examination, from an acute nephritis induced by hyperautotuberculinization. A fifth patient, who improved markedly, died fifteen months later of influenza. The sixth, likewise improved markedly, so far as the pulmonary condition was concerned, but developed an acute psychosis which was responsible for her death four months after operation. One patient was not helped by phrenicectomy, and died nine months afterwards of a pulmonary lesion. This record, we believe, represents what may be minimally expected from surgical therapy.

Technic.—We do all of our surgery under novocain anesthesia in conjunction with a preliminary dose of morphin and hyoscin the dosage being varied to suit the physique and nervous temperament of the individual. Frequently, we use a synergistic method of combining morphin sulphate ⅛ gr. with 2 c.c. of magnesium sulphate, given two hours, one hour, and one-half hour before operation. With the second dose, 1/120 gr. to 1/100 gr. of hyoscin is added. The patients may be entirely oblivious to the procedure, having little or no recollection of pain unless the operation lasts more than an hour. With large dosage, up to 200 c.c. of 0.5 per cent novocain, we have seen no untoward effects. Our custom is to do a phrenicectomy through an incision made on the clavicle along the base of the subclavian triangle. This is deepened through the platysma, superficial and deep cervical fascia and its adjacent fat pad, by sharp and blunt dissection, exposing the phrenic nerve as it lies on the scalenus anticus muscle. The internal jugular vein often has to be retracted medially. Sometimes the transverse cervical vessels and the external jugular vein require retraction. The nerve is then severed and twisted out for as great a length as possible on a special forceps with a shoulder at the end to prevent slipping off. This exposure leaves practically an unnoticeable scar, facilitates the removal of the nerve, and insures the destruction of the accessory communicating rami. We have found in the dissecting room and at operation a ramus communicans from the fifth cervical nerve in twenty per cent of individuals.

One to four weeks after phrenicectomy it is usual to proceed with the first stage of the thoracoplasty, using Sauerbruch's incision; removing the first to the fifth ribs subperiosteally and then at another like interval, the sixth to the eleventh inclusive. By doing the upper stage first there is less derangement of coughing function

and less mediastinal displacement. The preliminary phrenicectomy has helped compression at the base, and patients become accustomed to the collapse more gradually. We have felt that there is not greater danger of aspiration into the good lung by compressing the upper ribs first. To insure a maximal collapse, we have learned the wisdom of removing the ribs close to the spine and of excising as great lengths as are consistent with the safety of the patient. We have not felt it necessary to do the operation in more than two stages.

Unquestionably, there is considerable shock attached to thoracoplasty, so that preliminary stimulation with digitalis, caffein, and ephedrin is often advisable, and again, postoperatively. There is a loss of hemoglobin, often amounting to five or ten per cent after a complete thoracoplasty. We have found it necessary, however, to transfuse only one patient. Thus far, we have not had to deal with air or blood embolism or pneumonia as complications. Because of lowered vitality, wound infection should be guarded against by extreme care in local skin preparation and subsequent technic. In our series we have had only two major wound infections. Two, of lesser moment, served only to delay wound healing.

In conclusion, we feel that surgical therapy, by artificial pneumothorax, phrenicectomy, and thoracoplasty is a great boon to many individuals who are otherwise doomed to die of pulmonary tuberculosis. In about 40 per cent of the cases subjected to operation, recovery will be assured; in 25 per cent, improvement will be effected. In the selection of cases for operation, each must be chosen on its own individual merits. It is impossible to predict the outcome with certainty. Surgery should always be used as a supplementary procedure. After operation it is essential that the routine régime for tuberculosis be continued until recovery has taken place.

Westinghouse Building.

ABSTRACT OF DISCUSSION

on Pulmonary Disease

ALEXANDER ARMSTRONG, M.D. (White Haven, Pa.): Although not a surgeon, I agree with the conclusions of Dr. Funk, that in the intelligent treatment of pulmonary suppuration we should depend upon team work.

Dr. Decker gave a practical and concise résumé of what is being done for pulmonary tuberculosis by surgery. He very wisely did not go into the statistics of results. In fact, none of those who treat tuberculosis say much about results. The most difficult problem which he has presented is that of deciding when surgical intervention is necessary in a case of tuberculosis. Given a case of active disease which is not doing well, and let us hope it is still unilateral, when shall we start to use pneumothorax? In 1915, in a paper read before this Society, on artificial pneumothorax, I suggested that if after six weeks of ideal treatment of tuberculosis —rest in bed, fresh air, regulation of diet, and forced feeding—the patient does not show some signs of making at least a partial recovery, we should try artificial pneumothorax, and not wait for six months or a year before doing something, because practically always in a month or two later the disease has spread to such an extent that surgery is impossible. After a while, as you know, pneumothorax often fails, sometimes because it does not do what we wish it to do, sometimes because we cannot get in because of adhesions and other complications. Recently, section of the phrenic nerve has become popular, and deservedly so. It is a rather easy operation, can be done under local anesthesia, at the patient's bed, and does not need much preparation, but I would advise those who contemplate doing it to review the anatomy, because the phrenic nerve is not always located where it is supposed to be; sometimes it hides very mysteriously.

There is no question that phrenicectomy does patients a certain amount of good. It lessens the cough by raising the diaphragm 2½ to 3 inches, and, as Dr. Decker has mentioned, it is sometimes a good thing in pulmonary hemorrhage. After these things have been tried, we have to consider thorocoplasty, a surgical operation which should be done only by an expert in surgery and with complete equipment, or the mortality may be high. Sauerbruch's mortality, at first, was 50 per cent. Alexander collected a thousand cases in which the mortality was 13 per cent. Archibald has the mortality so low as 3 per cent. It is easier to persuade patients to have the operation done if they can be assured of getting off the table alive. We cannot yet assure them that there symptoms will be better after the operation. As Dr. Decker has said, they must be referred to the internist for treatment for an indefinite period. You will notice a diminution of cough, a lessening of sputum, and sometimes a sudden clearing up of the bacilli, which are decided advantages.

E. F. BUTLER, M.D. (Elmira, N. Y.): Many cases of pulmonary suppuration will come to surgery. Before surgery is instituted, however, it is only proper, as Dr. Funk emphasized, that all acute cases be given an opportunity, under adequate medical régime, to arrive at a spontaneous cure. Approximately a half of the recent acute cases of localized lung abscess can be adequately cared for on a basis of postural drainage and competent medical supervision. The bronchoscopist should be consulted before the surgeon. Bronchoscopy will determine a favorable outcome in an additional percentage of cases. The bronchoscopist can play a particularly useful rôle in cases of suppuration produced by a foreign body. He may also discover the presence of a malignant condition, by no means an infrequent etiologic factor in pulmonary suppuration.

Cases of long standing, unless they be due to pulmonary spirochetosis, will hardly derive benefit from medical care. Bronchoscopic treatment may be palliative only; surgery offers the best prospect.

All thoracic surgery is intricate. Surgery of pulmonary suppuration is particularly difficult and will be best done by those who are thoroughly familiar with this field. Needling through the chest wall into diseased lung tissue is dangerous and should not be done. The operative procedure may well be divided into several stages and the mortality risk be greatly reduced thereby. Positive pressure anesthesia is especially desirable to minimize the risk attendant on an open pneumothorax. Simple drainage is, as a rule, inadequate to cope with extensive pulmonary suppuration. The surgical attack should be a radical procedure.

IMPORTANCE OF VISUAL-FIELD STUDIES AFTER HEAD INJURIES*

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WASHINGTON, PA.

Head injuries with their coincident trauma to the cerebrum and other intracranial structures have always been one of the most important and serious problems of the physician. The gravity of the problem increases yearly with the increasing traffic over the public highways.

In the State of Pennsylvania, in 1928, there were reported 27,364 automobile accidents resulting in the deaths of 1558 persons. During the first eight months of 1929, there were reported 27,017 accidents, with 1196 deaths.

McClure reports that in 1926, there were 23,000 deaths from automobile accidents of which there were probably 600,000 to 700,000 during the year in the United States. In the same year there were 24,000 deaths from industrial accidents which reached an estimated total of 3,500,000.

These figures are mentioned merely to indicate the increasing frequency of fatal accidents, many of which must have been due to head injuries. There is a much larger number, however, who sustain severe but nonfatal accidental injuries, many of which also involve the head.

A certain percentage (which must reach a considerable figure in the aggregate) suffer some degree of visual field loss, but relatively few of these receive sufficiently thorough examination to reveal such losses unless they are so large as to be obvious.

Visual field loss to the extent of hemianopsia may exist without the realization of the individual suffering from the condition. Fuchs states: "Reorganization of retinal function frequently occurs after homonymous hemianopsia, the half visual fields being spontaneously reorganized on the normal plan so that a pseudofovea develops with vision as before, the subject being unaware of his hemianopsia."

Only brief mention will be made of certain anatomical features of the visual pathways. The centers of peripheral vision are in the occipital lobe cortex about the calcarine fissures, the cortex above the fissures representing the lower portions of the fields of vision. The macular centers in the posterior tips of the occipital lobes appear to be very large in proportion to the retinal areas represented. They have a double arterial supply, the overlapping of which probably explains macular escape.

The extensive distribution of the visual pathways and the exposed position of the visual centers in the occipital lobes make it seem probable that every severe head trauma produces some degree of visual-field disturbance.

Disturbances of the visual pathways after head trauma may be due to:

(1) Traumatic cerebral edema. Occurring after most head injuries, the primary type is not usually extensive or dangerous but the secondary edema caused by blocking of the cerebrospinal circulation is often an important and serious complication.

(2) Contusion or laceration of tissues. These result from the impact of the traumatic force or displacement of bone fragments by fracture of the skull.

(3) Retinal edema probably occurs in most cases but is transitory and not extensive. It is more common than is generally appreciated and is not always associated with edema of the optic nerve head. We have recently seen three patients with retinal edema following head trauma, who showed no abnormal disk changes.

(4) Hemorrhage, which may be (a) intracerebral, (b) subdural, or (c) extradural. Massive hemorrhage with clot formation will affect function according to location and degree. Nafziger reports a case of intracerebral hemorrhage with clearing of homonymous hemianopsia after removal of the clot.

(5) Sequelæ, certain of which may cause localized pressure on the visual pathways. Eagleton has reported cases of (a) brain cyst, (b) brain abscess, and (c) arteriovenous aneurysm after head trauma.

Examination of the visual fields after head trauma may reveal: (1) Contraction of fields: (a) Hemianopsia; (b) quadrant or sector anopsia or indentations; (c) irregular contraction; (d) concentric contraction; (e) complete peripheral loss with macular escape (double hemianopsia. (2) Scotoma: (a) Enlargement of blind spot; and (b) loss of central fields (macular loss). (3) Defects caused by functional disorders.

Visual field changes may be transitory or permanent, and are of organic or functional origin. In the final analysis, those produced by head trauma result either from direct injury or pressure. Continued pressure interferes with blood supply and results in atrophy and paralysis of function.

Traumatic cerebral edema or hemorrhage may cause increased intracranial pressure which may result in: (1) Papilledema or choked disk; (2) retinal edema, and (3) atrophy (optic nerve).

Choked disk is due to edema of the optic nerve papilla and causes enlargement of the normal

*Read before the Section on Eye, Ear, Nose, and Throat Diseases of the Medical Society of the State of Pennsylvania, Erie Session, October 2, 1929.

blind spot. Central scotoma appears if the edema extends to the macula and the union of these defects will produce a ceco-central scotoma. In the early stages there is no peripheral contraction.

Peter states: "The early presence of changes in the peripheral fields evidences optic nerve inflammation rather than mechanical swelling of the disk, as does also early impairment of central vision which seldom occurs in simple edema (choking) until a late stage is reached, while in papillitis central vision is almost always involved from the first."

Eagleton calls attention to the necessity of frequent charting of the visual fields in traumatic (and infective) lesions of the temporosphenoidal lobe as the field defects (hemianopsia and hemianopic indentations) may be present at one time and absent at another. He states: "Because of the delicacy of the mechanism necessary to produce a visual field defect in this region, very slight relief from pressure may suffice to relieve the hemianopsia," and cites a case of traumatic cyst in which the hemianopsia largely disappeared during the first stage of an exploration following the removal of bone and before the dura had been opened.

Because of the proximity of the visual centers, head injuries in the occipital region are of special interest. Dr. M. L. Hine has reported a series of such cases with the following conclusions:

(1) In the case of injury at or near the occipital pole, the hemianopsia is usually complete.

(2) The visual fields are gradually restored from center to periphery.

(3) The field of vision returns in the upper quadrants before the lower as the brunt of the blow falls on the part of the occipital cortex above the calcarine fissure. Injury below the occiput is likely to be fatal because of injury to the cerebellum or medulla. No case of occipital cortex injury by contrecoup could be found for investigation.

(4) The restoration of function is at first incomplete, but proceeds in a definite order, color perception returning after the perception of white.

Analysis of his cases shows that there were three cases of concussion with scalp wounds in the occipital region, and four cases of fracture of the occipital bone.

Hine terms the cortical injuries *concussions*, although he states that a bruising of the cerebral cortex has been taken as the pathologic basis. He stresses particularly the necessity of early and frequent examination of the fields and cites patients with quadrant or half-loss who recovered within a week.

Restoration of the visual fields began on the average within 3 or 4 days after injury and recovery was practically complete at the end of 14 days with the exception of one patient with bilateral concentric contraction, considered functional.

The field defects usually found in the functional disorders include: (1) Concentric contraction, (2) tubular fields, (3) spiral fields, (4) exhaustion fields, and (5) oscillating fields.

The criteria for accurate differentiation of the functional disorders are not precisely defined. They are classified as hysteria or neurasthenia, and traumatic neuroses are placed in either group according to the predominant symptoms.

Peter agrees with von Reuss that constant field changes are hysteric, and variable field changes are of neurasthenic origin.

The typical field change in hysteria is concentric contraction of the tubular type. Traquair states that the field is usually small with steep edges and advises that such fields be studied by quantitative perimetry and repetition with reversed order of the usual technic.

Fields characterized by exhaustion and instability are usually considered characteristic of neurasthenia, of which the spiral field, ascribed to fatigue, is typical. Hurst and Symns, however, do not agree, but reflect the opinions of Babinski and Morax that the inward spiral is caused by the method of moving the test object inward. By reversing the direction, i.e., by moving the test object outward, they have produced outward spirals and "have in this way often produced an inward spiral for one eye and an outward one for the other, or an inward spiral one day and outward spiral another day with the same eye."

Some authorities prefer to classify certain of the functional disorders as psychic and attribute the visual field changes to disturbances of the visuopsychic apparatus.

We have reviewed 37 cases of head injuries which were selected from the literature because the case reports gave satisfactory data concerning the visual fields. Thirty of the cases occurred in civil practice but none of this particular group was due to a projectile. The other 7 were cases of injury in the occipital region occurring in military practice. Included in the series were 18 cases of homonymous hemianopsia and 12 cases of bitemporal hemianopsia. The number of the latter does not indicate the true ratio of this type of injury but is probably due to the desire to record instances of injury to the crossed fibers of the optic chiasm.

The problem of visual field loss after head trauma is more than academic, especially if industrial insurance is involved.

It is most important after these injuries to learn the character and degree of visual field defect (if any) because: (1) The presence of certain defects will aid in the determination of the severity of the general cerebral trauma. (2) Characteristic defects assist in the localization of certain cerebral lesions. (3) Prognosis as to recovery of visual and other cerebral functions will be assisted, e.g., a half or quadrant loss clearing in four to five days. (4) Material help will be offered in the solution of industrial insurance problems. Two aspects are especially important: (a) the problem of traumatic neuroses, and (b), the question of future employment. Functional disease is not always due to malingering but any one who has contact with compensation cases knows that frequent attempts are made to profit through its provisions. The question of future employment is important to the employee, employer, and to the public at large.

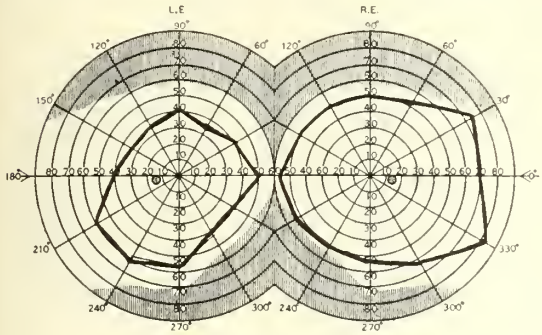

Fig. 1. Case of T. F.

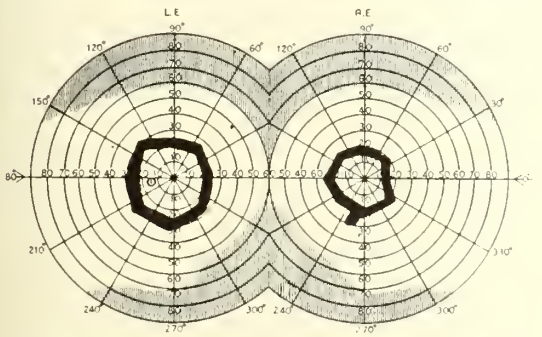

Fig. 3. Case of W. W.

T. F.—Mine accident caused deep scalp wound in left frontoparietal region and a slightly depressed fracture. Later the patient complained of headache, poor vision, and vertigo.

Visual fields showed a moderate general contraction of left, most marked in superior temporal quadrant. Patient did not return to usual work for 2½ years after injury. Moderately severe injury to the brain and meninges was the most important factor in this case although there was also an element of traumatic neurosis. See Fig. 1.

J. S.—Premature dynamite explosion in a mine ruptured the right tympanic membrane. No skull fracture was demonstrated by x-ray examination. Later, the patient complained of deafness and tinnitus in the right ear and blurring of vision of the right eye. In subdued light, the right and left pupils were 6 and 3 mm., respectively. Pupillary reactions were normal, and vision 15/20 in each eye.

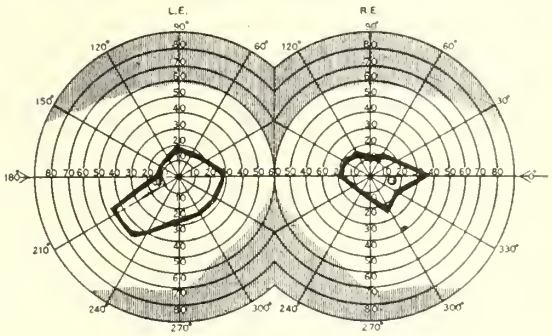

Fig. 2. Case of J. S.

The visual fields showed irregular contractions of considerable degree which were more marked for the right eye. Audiometric study showed complete loss of hearing in the right ear with 52 per cent loss in the left ear. Six months after injury there was no essential change in the patient's condition. He had undoubtedly sustained a severe injury to the brain and meninges. See Fig. 2.

W. W.—Mine accident caused a small depressed fracture of the inner table of the skull above the left eye. There were a marked ecchymoses of the lids and subjunctival hemorrhages. Ocular motions were limited in all directions and double vision existed, except when looking forward. Ocular fundi showed slight general retinal edema lasting several days.

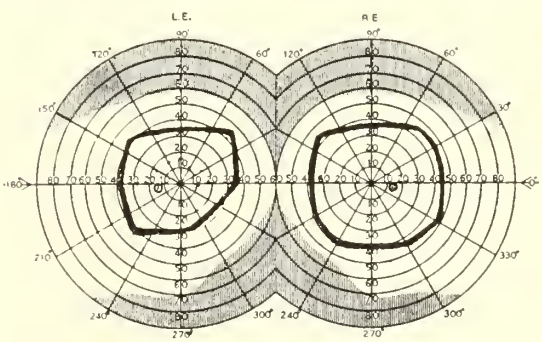

Fig. 4. Case of E. P.

The visual fields showed concentric contraction to 5 degrees on the day after injury but gradually expanded to 30 degrees. Four months after the accident, the fields were apparently stationary at 30 degrees, and the patient said he could not see even large objects until they were directly in front of him. See Fig. 3.

E. P.—An accidental blow on the head by a baseball bat, produced fracture of the left frontal bone extending through the left orbit and left frontal sinus.

The visual fields showed slight contraction which was more marked for the left eye. Examination of the

eyes was otherwise negative. Later the fields were fully expanded. See Fig. 4.

W. B.—The patient had a compound fracture of the skull in the left frontoparietal region. When first seen the left pupil was dilated and fixed. Later it was contracted and fixed. There was loss of convergence of the left eye and marked retinal edema in the upper temporal quadrant of the left eye.

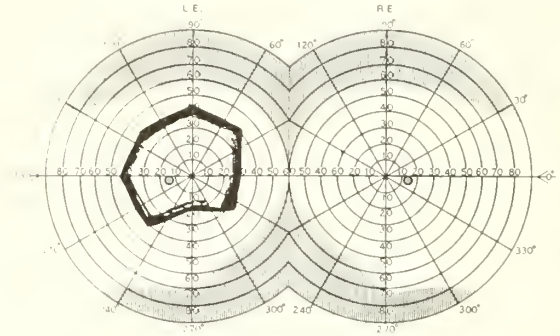

Fig. 5. Case of W. B.

The left visual field showed quadrant contraction.

At operation the depressed fragments were elevated and a large extradural blood clot was partially removed. Recovery was uneventful and four days later the retinal edema had disappeared and visual fields were of normal limits. See Fig. 5.

W. G.—Head injured by a fall, producing unconsciousness, bleeding from right ear, contusion in the left temporal region, and subconjunctival hemorrhage in the left eye.

Visual fields were of normal size on the second day after injury. Ophthalmoscopic study showed disk margins clear, veins overful, and moderate retinal edema about disks.

Patient had an uneventful recovery and later examination showed no unusual findings.

L. S.—The patient's head was injured in a mine accident. The left visual field seemed somewhat contracted by gross testing on the day of the accident,

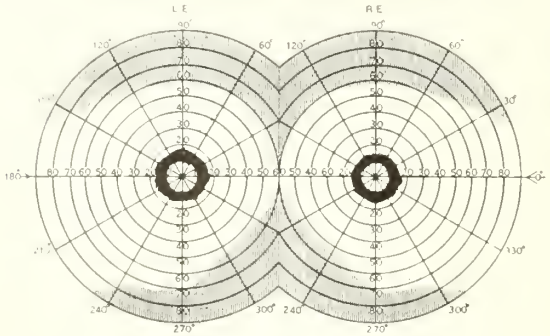

Fig. 6. Case of B. D.

but two days later the fields were of normal limits. This patient showed slight retinal edema with normal disks in both eyes.

C. T.—A fall of 40 feet caused a fracture through the right side of the frontal bone extending into the frontal sinus, orbit, and base of skull.

Two weeks later, diagnosis of traumatic diabetes insipidus was established and it was noted that the patient was gradually losing his hearing. Later deafness became complete and douching of ears elicited no vestibular responses.

Visual fields could not be charted after the deafness developed as the patient had never learned to read and it was very difficult to communicate with him. Wernicke's pupillary phenomenon was questionable although the response was more active from the temporal portion of each retina. The patient paid no attention to a small light when it was held to the temporal side but looked toward the light when it was held near the nose.

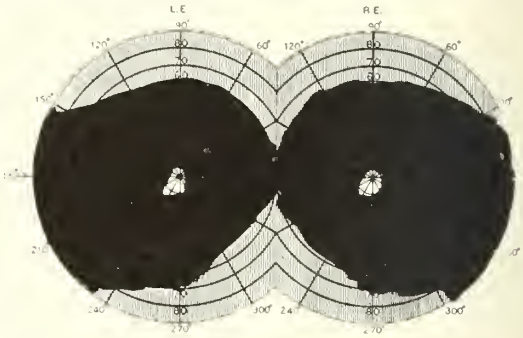

Fig. 7. Case of G. P.

We feel confident the charting of the visual fields in this patient would reveal bitemporal field losses.

B. D.—The patient fell and struck his head on a tile floor. He was sent to a hospital at which diagnosis of toxic encephalitis was established by Dr. Wright. Later, the patient developed tubular vision with fields concentrically contracted to about 10 degrees. In Dr. Heckel's opinion, the contraction of the visual fields was of psychic origin. The Pennsylvania Workmen's Compensation Board refused compensation for this patient. The details are summarized in the *Decisions of the Pennsylvania Workmen's Compensation Board,* 11: p. 280. See Fig. 6.

This case is reported through the courtesy of Drs. George J. Wright and E. B. Heckel of Pittsburgh, and is included particularly for comparison with the preceding case.

G. P.—Complete blindness appeared suddenly 5 days after apparently trivial head injury. Ten days later vision returned and gradually improved. Two months after the accident, the central vision was 5/200 in each eye and the visual fields showed marked loss of peripheral vision. Ten months later the visual acuity had increased to 15/50 in each eye but the fields were not improved. See Fig. 7.

He received compensation for complete permanent disability. This case was reported in detail in the *American Journal of Ophthalmology,* September, 1929. He showed no improvement 1½ years after injury.

SUMMARY

(1) Severe head injuries occur frequently and it is probable that many of them result in some degree of permanent visual-field loss.

(2) The extent of the visual-field loss can be determined by careful perimetric study.

(3) The relation of visual-field loss and industrial insurance is an important problem.

(4) The ophthalmologist should be in daily attendance on all cases of head injury and should institute frequent examinations of the visual fields.

(5) Ten cases are reported to indicate the degree and frequency of visual-field losses after

head injuries. Industrial insurance is an important aspect of the problem in five of these cases.

In conclusion, we should like to express our appreciation of the courtesies and coöperation of Dr. John B. McMurray, who has also observed several of the cases included in our report. His comments and suggestions have been most helpful.

Washington Trust Building.

ABSTRACT OF DISCUSSION

John B. McMurray, M.D. (Washington, Pa.): To be of value, visual fields must be accurately taken, and verified by repeated examinations. Unfortunately, many of these patients who come to the general hospital with severe head injuries are so badly injured that it is impossible to take fields at the time, so a great many cases reported are cases that have shown a tendency to recover, at least enough so that you can get the coöperation of the patient.

The optic nerve seems to be particularly liable to edema following trauma. The case reports given in this paper include a number of audiograms. It would appear that the eighth nerve is likely to suffer from edema in head trauma. This is in accordance with Dr. Eagleton's statement that the optic nerve is the first one affected, the eighth nerve second, and the motor nerves of the eye are affected only by direct pressure.

In those fractures that extend to the base of the skull and across the optic foramen, the patients say they cannot see, but when the eye is examined nothing wrong is found; the media is clear and the fundus shows no abnormality. The only clue to trauma involving the optic foramen is that the pupillary reaction is absent from the injured to the well side, but, vice versa, it is all right. Sometimes the fields are contracted, but this is due to damage to the anterior fossa, not to the posterior.

There would be a great deal of valuable information obtained in studying the fields in head trauma cases if we had the opportunity of taking the fields early, and frequently repeating them during the convalescence. Unfortunately, many of them are so badly injured and their mentality is so low that you cannot take visual fields. I hope this work will be carried on further, and that observations will be made on the eighth nerve, using the audiometer for this purpose.

Harvey S. Thorpe, M.D. (Pittsburgh, Pa.): The essayist refers to the necessity of taking frequent field measurements. In the last decade, Cushing and Eagleton have pointed out the importance of repeated measurements of fields in cases of occluding fractures. Cushing pointed out a syndrome which involved the hypophysis from the standpoint of paracentral field contraction for color, and, in a recent communication, Eagleton refers to the importance of fields in suspected cases of brain abscess, especially of the temporal sphenoidal lobe, in which the radiations pass around the posterior horn of the lateral ventricle. These field changes are sometimes present and absent on the same day, because of transient edema of the brain or pressure by a cyst or abscess.

Much has been added to our knowledge by the newer anatomy and physiology of the cerebral cortex, as pointed out by Putnam of Amsterdam. A patient who came to me quite recently was interesting: a young boy who, in an automobile accident, had received an injury to the occiput, with fracture, and who was totally blind, although the pupils reacted to light. In the course of clearing up this condition, it was found that he did not see objects unless they were moving. This might be explained by the presence of edema of the end of the occipital lobe which involved the peripheral as well as the macular vision. As this edema cleared up, he was able to see moving objects, and then his macular vision became normal.

The interesting point brought out by Dr. McMurray was that in head injuries with edema of the optic nerve, the reason for the contraction of the visual fields might be because the pathology is anterior rather than posterior.

An important thing is the repetition of field examinations. Patients learn more about these the oftener we take them and we get better results when the fields are repeated.

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*Symposium on Renal Sympathectomy**

THE ANATOMY AND PHYSIOLOGY OF THE SYMPATHETIC NERVOUS SYSTEM OF THE KIDNEY

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I. Extrinsic nerve supply of the kidney is derived from the renal plexus which extends from the aortic plexus along the renal artery to the hilum of the kidney. The renal plexus is made up of branches, arising from: (1) the center of the semilunar ganglion; (2) the lesser splanchnics; (3) the major splanchnics; (4) a branch arising from the first lumbar ganglion; and (5), small branches arising from the small ganglion described by Hirschfeld which lies on the posterior aspect of the superior mesenteric artery. This is true in the majority of cases.

According to Yost, 1914, the renal plexus is also joined by one or more slender rami from the lumbar portion of the sympathetic trunk. Vagus branches run directly to the renal plexus, in many, but not in all cases. Direct vagus branches seem to occur more commonly on the right than on the left side. Preganglionic fibers, supplying the kidney, are present in all the splanchnic nerves. According to Müller, 1921, the afferent fibers, supplying the kidney, are derived from the fourth to the twelfth thoracic segments, but clinical evidence seems to indicate that they are derived mainly from the tenth, eleventh, and twelfth thoracic segments.

II. The intrinsic nerves follow the blood vessels and form a rich plexus around them. The filaments can be followed to the point at which they enter the parenchyma. The nerves

* Read before the Section on Urology of the Medical Society of the State of Pennsylvania, Erie Session, October 2, 1929.

follow the blood vessels to their finest ramifications. Müller has observed small nerve fibers in the parenchyma of the kidney, mainly nonmedullated fibers of small caliber. Renner, 1924, observed very few small medullated fibers in the renal parenchyma, although medullated fibers occur in greater abundance in the region of the renal calices and in the renal pelvis. According to Habler, 1922, the renal calices are richly supplied with nonmedullated nerve fibers that terminate in relation to the musculature, including smooth muscle fibers, which he claimed to have observed in the renal calices above the sphincter papillæ.

III. One should distinguish between pain caused by mechanical or traumatic, and pain caused by inflammatory conditions. According to Papin and Ambard:

A: The former (mechanical or traumatic) are due to: (1) distention of the ureter, pelvis, and calices; (2) increased tension as the result of congestion or edema of a parenchymatous organ, confined within an inelastic sheath or capsule; (3) contact of a foreign body with the walls of the pelvis or calices; (4) traction upon the renal pedicle; (5) compression of adjacent nerves (this is infrequent and in all probability produced by toxemia rather than by pressure); (6) renal sclerosis; painful nephritis, the pathologic physiology of which is still obscure.

B: Inflammatory causes of pain are the following: (1) lesions of the ureter, pelvis, or its calices, such as ureteritis, pyelitis, and pyonephrosis; (2) lesions of the parenchyma, i. e., pyelonephritis, tumors; (3) lesions of the perirenal cellular tissues, for example, perinephritis and perinephritic abscess.

Renal pain is usually renal pelvic pain and, if one excludes the rare cases of torsion of the pedicle, colic usually means a distention of the renal pelvis. In migrating renal calculi, in hydronephrosis, in movable kidney, and, less frequently, in tuberculosis, neoplasms, and nephritic hematuria, the ureteral obstruction is expressed by colic syndrome, which is the result of distention of the renal pelvis.

Head states that although the viscera can show very indistinct sensations of pain, the latter may cause marked hyperesthesia of the corresponding cutaneous zones. The vagus plays no part in transmitting pain from the kidney.

The nerves within the kidney are usually nonmedullated, in the pelvis and calices; on the other hand, the fibers are frequently medullated. The cells in the ganglia of the renal plexus are of the sympathetic type. There is no doubt that renal pain comes from the sympathetic fibers.

According to Wundt, afferent stimuli are opposed except when very powerful. This view is confirmed by Müller and MacKenzie, who concede that painful sensations from the sympathetic area are felt only when they reach the communicating branches of the posterior spinal nerve roots and the cerebrospinal centers. The result is that pain is referred to the area of distribution of the nerves in the corresponding rami communicantes.

IV. Available experimental data indicate clearly that denervation of the kidneys is not incompatible with life. It has been shown, experimentally, that excretion may continue many months, perhaps indefinitely, after all connections of the kidney with the central nervous system have been divided.

The first detailed study of the function of the kidney after transposition was carried out by Lobenhoffer, in 1913. In his experiments, the pedicle was severed and the kidney was transposed to the splenic vessels. On the basis of his results, he concluded that a kidney transposed in this manner is able to meet the ordinary demands of life.

239 South Forty-fifth Street.

THEORETICAL INDICATIONS FOR RENAL SYMPATHECTOMY

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PHILADELPHIA, PA.

To remove deliberately the nerve supply from one or both kidneys would appear altogether unreasonable unless two major premises can be established. First, we should be able to show that no untoward results, either temporary or permanent, would be caused by denervation of the kidney; and second, that there should be established sound theoretical indications for the operation in certain cases of definite renal pathology.

Sufficient animal experimentation has been done to establish the first premise beyond any reasonable doubt, and this conclusion has been confirmed by operations which have been performed on the human kidney. In work done on experimental animals in the Surgical Research Laboratory of the University of Pennsylvania Graduate Medical School, it has been shown that both kidneys when denervated function sufficiently to maintain life indefinitely. Dogs that have had both kidneys stripped as far as possible of their nerve supply have not only lived for more than three years in as good health as normal animals in like environment, but have undergone without physical impairment various experiments designed to test the function of the kidneys far beyond any normal demands likely

to be made upon them. Then, too, it has been definitely established that after one and one-half to two years the denervated kidney, instead of deteriorating in function, becomes reinnervated and responds to well-devised tests in the same way as the normal kidney.

Before advancing certain theoretical indications for the employment of renal sympathectomy as a surgical procedure in pathologic conditions of the kidney, it is in order to state briefly those well-proved fundamentals of renal nerve physiology on which such indications are based.

The nerve supply of the kidneys is derived almost entirely from the splanchnics and, with the exception of a few sensory fibers, is essentially vasomotor in character. The vasoconstrictor function is much stronger than the vasodilator, therefore, if the nerves entering the kidney are severed or destroyed, sense of pain is abolished and the circulatory system of the organ is opened so wide that a much greater quantity of blood passes through than under normal conditions. This results in the secretion of an increased amount of urine, dilute in quality, of low specific gravity, and comparable to that of ordinary diuresis.

If it is granted, then, that no untoward results are likely to attend the operation, it follows as a corollary that we may expect favorable results from severing the renal plexus or other nerves entering the kidney, in any condition in which pain demands relief, vasoconstriction is excessive, an increased blood supply to the kidney is desirable, or diuresis might be advantageous.

Theoretical Indications

That nephralgia or pain of any character in the kidney can be relieved by denervation seems obvious. This aspect of the subject has been lifted from the realm of speculation to that of proved fact by the work of a few French urologists and by the brilliant surgery of Hess in this country. Whatever may be the source of pain which, lacking a demonstrable pathology, is sometimes called nephralgia, nothing can be more certain than its relief by this operation. Whether it is an actual neuralgia, as claimed by the French, or whether it is caused by adhesions about the kidney, as claimed by some American urologists, severing the renal nerves in addition to freeing the kidney make relief of the pain entirely probable.

Theoretically, it appears the logical procedure in reflex anuria. Neuwirt has reported a case in which he treated reflex anuria due to stone by anesthetizing the splanchnic nerves on each side with 30 c.c. of 1 per cent novocain-adrenalin solution. Fifteen minutes afterwards the colicky pain had entirely subsided and kidney function had been reëstablished. Both sides were anesthetized on account of uncertainty in the diagnosis. Theoretically, unilateral anesthesia would have been sufficient.

Reflex anuria and oliguria are produced by reflex stimulation of the vasoconstrictors, and since these impulses are carried only by the sympathetics, inhibition must cease and function must be restored when these nerves are anesthetized or sectioned. The same must happen when the renal plexus is severed or stripped away, and this procedure would probably be more convenient for most surgeons than would anesthetization of the splanchnics. That such an operation would at once relax the spasm of the renal vessels and cause restoration of function is attested by the known physiology of the renal nerves.

Ambard, and Legueu and Flandrin have reported several cases in which renal sympathectomies were done for the relief of small painful hydronephroses. These small nonmechanical hydronephroses are supposed to be the result of destruction by chronic disease of the equilibrium of nerve impulses going to the kidney and the upper ureter in consequence of which inhibitory influences gain control and cause spastic stricture of the proximal ureter. If this hypothesis is true, we may have in the ureter a condition analogous to spastic paraplegia which has been successfully treated by section of the sympathetic nerves. Therefore, it is just as reasonable to expect a cure from the operation in this type of hydronephrosis as to expect relief of pain, for if the nerves are severed the inhibitory or spastic influence will be removed and the ureter will be able to relax.

It has been observed that when one kidney has been removed on account of advanced tuberculosis, the remaining kidney, although it too may be infected, improves in function and continues to do the work of both indefinitely. This arrest of the disease in the remaining kidney is due to its increased blood supply incident to increased function. This suggests renal sympathectomy for the arrest of tuberculosis in a kidney in which the infection is recent or limited.

Cases have been reported in which tuberculosis of the extremities, such as joint and bone tuberculosis, has been arrested by periarticular sympathectomy. Theoretically, we would expect more favorable results in a vascular organ like the kidney which is so much more susceptible to nerve influence than any tissue of the extremities.

While the modern tendency in all surgery is toward the conservation of tissues and organs

wherever possible, the tuberculous kidney is invariably doomed by present-day practice, especially if the opposite kidney is not similarly infected. As the signs and symptoms of early renal tuberculosis are better understood and as it becomes possible to make early diagnosis of this condition with greater frequency, before too great damage to the renal parenchyma has occurred, there is sound theoretical justification for attempting conservation of the kidney in selected cases. This seems practical and at least deserving of trial since it would not preclude a later removal of the kidney if such became necessary.

When all the nerves supplying the kidney are stripped away or broken up, a condition of over function is produced comparable to any form of ordinary diuresis. This suggests denervation of the kidney to prevent reformation of calculi in patients in whom nephrolithotomy has been done. Theoretically, such operation would cause a better flushing of the kidney by an abundant and more dilute urine for at least several months afterward. If this condition could be maintained indefinitely, it would meet every indication now regarded as practicable in the prevention of calculous formation; but while our experimental experience does not foster such sanguine expectations, it is believed that improved function of the kidney might continue long enough to overcome the untoward effects of previous stasis and to add very materially in clearing up or modifying an infection which may have been primarily responsible for the formation of stone.

The nerves of the renal plexus could be severed while the kidney is exposed for the removal of calculi without adding materially to the hazard of the operation, and the possibilities seem logical enough to recommend such procedure as worthy of trial.

Decapsulation of the kidney has long been practiced as a last resort in certain forms of nephritis. Boeminghause[1] has decided that decapsulation of the kidney is not well-founded theoretically "since the expected permanent relief of pressure or improved vascularization is not obtained." Decapsulation to relieve pressure plus denervation to increase vascularization would appear the obvious operation to perform in such cases.

It has been demonstrated that only a fraction of the glomeruli in a normal kidney function at one time, and it is also well understood that only a fraction, probably about one fourth, of normal kidney tissue is necessary to normal excretion. We do not know to what extent function may be inhibited in a diseased kidney by the effect of disease on the inhibitory nerve supply. It is possible that death may result in many cases of nephritis in which there is still enough unimpaired cortical tissue to sustain life if it could be relieved of all inhibition and permitted maximum function. This view seems so reasonable that we might try the operation with every expectation of favorable results.

Finally, I wish to propose a theoretical indication for renal sympathectomy which may seem premature, since nothing has been done in the way of direct experimentation to support it, but which I have reason to believe will be the most valuable of all for the conservation of human life.

It has been estimated that all the blood in the body flows through the kidneys every five minutes. If, by renal sympathectomy, we can cause all the blood to flow through the kidneys in less than the usual or normal time, it seems obvious that we would thereby relieve the systemic circulation by whatever extra amount of blood we could short-circuit through the renal system. That this would be of almost instant relief in threatening arterial hypertension can hardly be questioned. Since all these cases have a nephritic complication, the toxicity incident to nephritis would be, in a measure, relieved by the operation, if our hypothesis is correct, and strain on the cerebral vessels would be lessened at the same time.

It should be remembered that in certain cases of nephritis there might be so much sclerosis of the renal vessels that the nerves could have lost a measure of, or entire, control, and that the result of denervation would be modified accordingly. There is a possibility that in extreme cases of renal sclerosis it might not be possible to increase the circulatory capacity of the kidney sufficiently to relieve the systemic circulation to any noticeable degree. This does not invalidate the indication in selected cases, nor can we be sure of improvement or failure in any condition until the operation has been given a trial.

This aspect of the subject had not occurred to me when Dr. Karr and I were experimenting on dogs and there has been no opportunity since to corroborate the idea by taking the blood pressure of animals before and after denervation of both kidneys, but there were certain features of the results which can be interpreted only by the assumption that blood pressure was lowered in all such cases. This theory, which may easily, and will, be tested experimentally, is offered at the present time with the hope that it may appear sufficiently reasonable and feasible for some bold surgeon to attempt in cases of grave hypertension when all other measures have failed. Spinal anesthesia, which lowers blood pressure, would

probably be the one of choice for such an operation.

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RENAL SYMPATHECTOMY

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In this symposium on renal sympathectomy, the clinical application of the operation, naturally, is of great interest. As the anatomy, physiology, and the theoretical indications for the operation have been so splendidly covered by Drs. Sangree and Milliken of Philadelphia, I will pass directly to the clinical experiences that I have had with the operation.

I wish publicly to give credit to Drs. Milliken and Karr for their work, which was the inspiration that prompted me to attempt its clinical application.

For the sake of convenience, my paper is divided into three major parts: (1) indications for operation; (2) technic of the operation; and (3) clinical results of the operation.

Indications for the Operation

It will first be necessary to review the preliminary histories and physical examinations prior to the operative procedure.

Close study of ten cases reveals that all the patients had as a chief complaint pain in the renal region referred to the scapula, chest, epigastrium, lower abdomen, or thigh. This pain was not relieved by any treatments of a cystoscopic nature and no other cause for the pain in other parts of the body could be ascertained. In some instances the pain was of such a character as to cause us tentatively to diagnose renal calculus, which could not be demonstrated either before or at operation. Seven of the ten patients have had previous abdominal operations for relief (Cases 1, 2, 3, 4, 5, 6, 7, and 10). Some of these surgical procedures, of course, were done for real abdominal disease.

In several of these, the presence of gastro-intestinal pain accompanied by nausea, vomiting, and other subjective symptoms made it necessary to eliminate the gastro-intestinal tract as a cause of the pain. The fact that previous surgical procedures had been done made it also necessary to rule out, as far as possible, adhesions as a causative factor. A complete x-ray study of the gastro-intestinal tract in Cases 6, 7, 9, and 10 was reported negative.

In all patients who had a history of pulmonary disturbance or a distribution of pain that could be caused by a thoracic condition, the chest was x-rayed (Cases 3, 6, 8, 9, and 10). In all these patients no evidence could be found of any condition that would account for the clinical symptoms.

The urologic study was complete in all cases. In several, the study was repeated several times for the purpose of checking and rechecking the findings. In all ten patients the bladder was essentially normal. There was obstruction to the passage of the catheter in Cases 1, 3, 5, 8, and 10. The obstruction was complete in one patient at the first cystoscopy. The obstruction was passed on the restudy. Urine was collected from each kidney separately and sent to the laboratory for smear and culture. Infection sufficient to cause pain was not considered unless an organism could be cultured from the urine collected from the kidneys separately. No tubercle bacilli could be demonstrated in any of the specimens, although the urines were constantly examined for the organism. Cultures of the urine showed positive infection in Cases 3, 5, 7, and 8. In none of these, however, was the infection considered severe enough, after careful consideration, to cause the pain. For example, in Case 8, the left kidney was the most badly damaged by infection and was a painless organ.

Indigo carmine was used as a functional test. Except for Cases 1, 4, 5, 8, and 10, the function was considered normal and equal on both sides. In Case 1, the painful side showed no dye excreted in two preoperative studies, in twenty-five minutes. In Case 4, the dye appeared in five minutes from the painful kidney, but never concentrated. Case 5 showed the dye elimination and concentration greatly delayed as compared to its fellow. In Case 8, the painful kidney excreted dye within normal limits, but its fellow, the badly infected nonpainful organ, excreted no dye in a half hour. Again, in Case 10, the painful organ excreted its dye better than the left nonpainful one.

The urologic tract was next x-rayed and pyelographed. No calculi were found in any cases. Cases 1, 2, 3, and 6 showed moderate nephrosis with some prolapsus. In Cases 4 and 5 there was no nephrosis but prolapsus with bad angulation of ureter on painful side. In Case 8, the right pyelogram was normal on the first cystoscopic study (painful side). The left showed a marked nephrosis in both halves of a double kidney. The third cystoscopic study showed a dilatation of the right pelvis. In Case 9, the pyelogram was normal, although a two-inch prolapsus was present on the nonpainful right side, while slight nephrosis was present on the painful side. In

Case 10, the painful right kidney was prolapsed two inches but there was no nephrosis.

Attempts were next made to duplicate or aggravate the pain that these patients had. This was always possible, and was done in an attempt to identify the patient's pain as renal. Those patients who had nausea and vomiting had it on overdistention, while the others became nauseated, some vomiting. A normal kidney will cause exactly the same symptoms if overdistended but the pain of renal colic can positively be identified and this was the only reason for this procedure. In Cases 4, 5, 6, and 10, the prolapsus alone was bad enough to be considered as the cause of the pain, gastro-intestinal disturbances, and the marked nervousness of these patients.

In all these cases operation was decided upon after careful elimination of all other possible sources of the pain by examinations of other parts of the body by competent observers. When the origin of the pain was finally fixed upon the kidney, attempts were made to relieve the pain by cystoscopic treatment. If kinks or strictures of the ureter were found, dilatation of the ureters with renal lavage was tried. In many instances this has cured the pain. In these few cases the treatment was of no avail, although carried out in one of the cases over a year. In two instances, even at the time of operation, it was felt certain that there would be found a calculus in the renal pelvis as the pain was so characteristic of this condition, although preoperatively, it could not be demonstrated.

In one patient (Case 8), the left or nonpainful kidney should have been removed but both kidneys were considered under par and it was felt that the patient could not sacrifice any of his renal structure. This may have been a case of renorenal reflex, the better kidney being the painful one. If so, we broke the reflex arc by sympathectomizing the good kidney.

There was only one patient (Case 7) on whom bilateral sympathectomy was done. Approximately two years after the operation on the left side, the patient came back with pain in the right kidney region. This pain lasted for a few months and the patient insisted that it was crippling. All the check-up cystoscopies revealed nothing to account for the discomfort. The patient had received so much relief from the former operation, that the same operation upon the right kidney was requested. This was done, chiefly because it was hoped to relieve the pain and no harm could come from the operation if it failed.

There was one patient who is not reported in this series. A woman, aged 32, had a painful left kidney. All examinations were essentially negative except for pain which was absolutely duplicated by overdistention of the renal pelvis. At operation, the renal vein was torn and it was necessary to nephrectomize her. The pathologist reported a perfectly normal organ. The pain which had existed a year previously has completely disappeared.

I have had several patients who had early tuberculosis of the kidney but have, as yet, never had courage enough to trust sympathectomy as a logical treatment. Milliken advocates it theoretically for the infected organ; Spitzer, for the normal one. Milliken takes the view that increased blood supply to the kidney will cure the early tuberculosis. Spitzer claims that if the normal kidney is denervated it will do more work, resting the tuberculous kidney and, therefore, tending to cure the infected organ by rest. Again, I have been tempted to use the procedure in a few cases of unilateral renal bleeding in which no cause for the bleeding prior to operation could be demonstrated. I have feared to take the chance. Twice I have decided on the operation, because of Milliken's theories that denervation should help to prevent recurrence of renal calculi. It certainly can do no harm. These cases are not being reported because they do not exactly fit into the scope of this discussion.

Before passing, I wish to make a few remarks about the diagnosis of small nonmechanical hydronephrosis. If we had some positively accurate method of measuring and x-raying the pelvis of the kidney this might be possible but the interpretation of a pyelogram depends so much upon the personal equation of both the cystoscopist and the roentgenologist that as a diagnosis it can be thrown out. All of us know that we can x-ray the pelvis in contraction or relaxation and with little or much distending medium and the result will often be different on successive examinations. The dye test also varies in the normal and the observation of its excretion is often the source of erroneous deductions.

One patient, Case 8, had a positive blood Wassermann. The blood chemistry reports were all within normal limits in every case.

A summary of the preoperative studies thus reveals that the operation of sympathectomy was done first and last to relieve pain. The cause of the pain seemed to be of a mechanical origin rather than inflammatory. The renal pain was associated with kinked ureters, small nephrosis, and movable or ptosed kidneys. The diagnosis of renalgia was reached purely by exclusion and elimination of other sources plus the duplication of the pain by overdistention of the pelvis. If the pain had been reasonably identified as of

renal origin, the cases were treated medically and cystoscopically. When relief could not be obtained, sympathectomy was done, experimentally first, rather than nephrectomy, with the thought uppermost that the operation, if it did not help, would do no particular harm and the latter operation could be done later.

Technic of Operation

The kidney is approached by any incision that best meets the individual demands of the operator. I prefer a straight incision, which starts at the edge of the erector spinæ group of muscles and which runs obliquely halfway between the lower edge of the ribs and the crest of the ileum, forward just beyond the anterior superior spine. The muscles are split and an attempt is made not to injure, any more than is necessary, the large nerves and vessels which occupy this area. The fascia from the kidney is then incised and split and the perirenal fat is separated from the true capsule of the kidney by finding the normal line of cleavage and the kidney is delivered into the wound. No attempt is made to conserve any of the blood vessels which enter the capsule of the kidney by way of the fascia or perirenal fat. The fat and fascia overlying the pelvis and the renal pedicle is stripped away by blunt dissection, completely exposing the vessels of the pedicle and the pelvis of the kidney. After this has been done, the thin fascia overlying the arteries and veins is teased away by forceps and the nerve filaments are picked off of the vessels by slipping a grooved director under them and cutting the filaments with a fine knife using a grooved director to protect the vessels from injury. Again the gauze is used to strip the distal ends of the fibers back toward the vena cava and aorta, completely exposing the vessels. The farther these thin filaments or the fascia which contains not only nerve filaments but lymphatics are stripped back, the less likelihood there is for regeneration. The pedicle is picked just as clean of all fascial elements as is possible. At times I have deliberately taken the blade of a knife and scraped the artery or arteries for half an inch. The bleeding is very minute and even small twigs have been sacrificed without any great amount of damage being done.

After the pedicle has been completely denuded, the pelvis of the kidney is stripped with gauze and the ureter is separated from its bed and from its fascial attachments to the surrounding tissues as low into the pelvis as possible, the pelvis and ureter thus being almost completely separated from any connection at all with its nerve supply. No attempt is made, of course, to make this stripping of the ureter as complete as that of the pedicle because of the fear of injury to the thin ureteral wall and for all practical purposes this stripping of the ureter seems to be sufficient. No attempt is made to suspend the kidney nor is the true capsule of the kidney interfered with in any way. In none of these patients have we done a decapsulation operation.

Loose tabs of fat in the kidney fossa are removed, the organ is replaced and the wound closed by layers according to the particular technic of the individual operator. No drainage is instituted.

The patient is returned to bed, a reasonably tight binder is applied, holding a pad against the abdomen below the kidney and the foot of the bed is elevated for several days. This has been found to be sufficient to keep the kidney in approximately a normal position until adhesions have sufficiently formed so that the organ is fixed as near its normal position as possible.

The operation is extremely easy; the complete dissection of the renal pedicle is not difficult but requires a great deal of gentleness and patience. We have had no particular postoperative trouble resulting from freeing the ureter nor have we had any postoperative trouble with these patients except that for a period of three or four days the pain over the kidney operated upon has seemed to be very much more marked than that following any other renal procedure. This, perhaps, is due to trauma, the elevation of the foot of the bed, and the fairly tight abdominal binder with a large soft pad pressing in on a hypersensitive abdomen.

Clinical Results

This is a review of the history and examinations of these patients, following sympathectomy. (Case histories are eliminated because of lack of space.)

A study of the postoperative findings reveals certain facts. Experimentally, the following have been proved:

(1) Section of the splanchnic on one side results in increased secretion of the urine on that side. Unilateral sympathectomy is essentially the the same thing, and while this finding is not necessarily of great importance, still the clinical findings would seem to verify this. Unfortunately, urine has not been collected from both kidneys separately over a sufficient length of time so that an average quantity could be ascertained.

(2) Innervation of the kidney is not essential to function compatible with life. This has been proved clinically, particularly in Case 7, the only patient who has been subjected to a bilateral

sympathectomy. This particular patient is living and the kidneys are functioning normally.

(3) With increased flow of urine in denervated kidneys, there is a relative lowering and a total increase of solids in the urine. This may be assumed to be clinically true because an increased blood supply to the kidney would naturally cause an increased output, while over a given period of time, the total solids would naturally be greater, although the specific gravity would naturally be lower.

(4) These changes continue for months. This can likewise be assumed to be true clinically.

Milliken and Karr's experimental work brings out the following facts.

(1) Indigo carmine given intravenously appears on the side operated upon in one-half to one and one-half minutes sooner than on the normal side. The jets were more frequent and were projected farther across the field and the volume of the stream was distinctly greater, while concentration was not as deep as from the normal kidney. Clinically, this has been true in Cases 1, 2, 3, 4, 5, 6, and 7. In the others there has been little, if any, change that was definite.

(2) The dye function of the normal kidney is inhibited by ether anesthesia, while that of the denervated kidney is not influenced. This has never been proved clinically.

(3) Three months after denervation, facts (1) and (2) were still present. The clinical findings may be assumed to verify this.

(4) Autopsied animals showed the denervated kidney larger, the cortex thicker, and every evidence, microscopically, of physiologic hypertrophy with no evidence of infection or degeneration considered as corroborative evidence of increased blood supply to the denervated organ. (There have been no deaths in the series, either at or since operation and, therefore, this cannot be verified clinically.)

(5) Bilateral denervation causes no untoward symptoms, neither death nor an increase in the urea nitrogen of the blood. (A study of Case 7 verifies this statement.)

(6) Denervated kidneys appear to be just as efficient as normal kidneys under stress.

Case 1 has been very ill with a flare-up of a pelvic infection after denervation, and Cases 1, 6, and 9 have been very ill since denervation and while the denervated kidney could not be studied during this period of time, complete studies were made subsequently thereto with practically normal findings, so it is logical to believe that clinically this fact has been verified.

While it is perfectly true that for the most part these various experimental observations have been verified clinically, it is also necessary to prove that the operative procedure does not permanently injure the kidney and to show that the kidney, its pelvis and ureters are in good condition later on. As most of these cases have had some form of ptosis, as kinking of the ureter has existed prior to operation and as there has been some dilatation, so-called, of the pelvis and calices, it is necessary to complete the clinical study to pyelograph these patients and to study these findings.

In every one of these patients, from an x-ray point of view, the condition of the pelvis, in so far as dilatation is concerned, has practically remained unchanged. The ureterograms no longer show any kinking of the ureters. The ptosis remains, although in one case, it is increased more after operation than before. These kidneys are still fixed in their position and the ureters are straight and the drainage is good. All the x-ray reports are similar before operation, some nephrosis; after operation in some cases, some nephrosis, but for the most part, the pyelograms are considered normal.

These follow-up examinations were made in: Case 1, ten months after sympathectomy; Case 2, one year after sympathectomy; Case 3, approximately one year after sympathectomy; Case 4, three months after sympathectomy; Case 6, seven months after sympathectomy; Case 7, at various times a year after sympathectomy; Case 9, six months after sympathectomy; Case 10, three months after sympathectomy.

This proves conclusively that sympathectomy does not increase the dilatation of the pelvis of the kidney nor the blunting of the calices and shows that the procedure in no way tends to increase stasis. The operative procedure, as a result of inflammatory adhesions, fixes the kidney in a definite position so that it is not a freely movable organ after operation, if it had been before.

This brings up an important observation on Case 6 which is important. This patient had a freely movable right kidney. Its excursion was from a normal position to the pelvis and the organ could be pushed into the left side of the abdomen. There is no question that a lot of this patient's pain came from a so-called Dietl's crisis. Following operation, this patient developed a perinephritic abscess which, unquestionably, must have been due to some slip in our aseptic technic. The kidney, however, is today fixed at the level of the fourth lumbar vertebra. The report, seven months after the operation and drainage of this abscess, shows that the kidney is a painless one; that there is no stasis in it, and no definite dilation of the

pelvis. The fluids injected into the kidney drained very rapidly into the bladder, showing the complete relief of any obstruction, and it is believed that the relief in this case is due to fixation in a definite position as well as sympathectomy.

In a paper before the annual meeting of the Western Branch of the American Urological Association in Seattle, Washington, July 6, 1927, I reviewed the results obtained in five cases, and wish to compare them with the results obtained in thirteen cases, ten of which are reported in this paper. Of the ten reported cases, all have been partially or completely relieved of their pain and gastro-intestinal disturbances with the exception of Cases 7, 8, 9, and 10. In Case 7, the bilateral sympathectomy was a complete success in so far as left renal relief was concerned but the right sympathectomy must be considered a partial failure because the pain has only been partially relieved on this side and the patient frequently returns complaining of pain over the right kidney. A few days' rest in bed and a ureteral dilation with lavage seems to produce relief for varying periods of time. My only explanation for this is, first, the painful kidney may have originally been the right, with the pain referred to the left kidney. The first sympathectomy may have simply broken up the reno-renal reflex and after this the pain fixed itself where it originated. As we know, there are some nerve filaments which reach the kidney in the walls of the vessel; it is possible that there are enough of these fibers to keep some of the pain going or the vessels may not have been denuded sufficiently at operation and this may account for the pain, or both may answer the question. The fact is this pain is only partially relieved, and, secondly, it may be that the source of the pain may have been misinterpreted, and its origin may not have been renal.

Case 8 is a partial failure. The best kidney was the painful one. This was denervated and the patient refused further treatment or study so it is impossible to report any check-up findings. About one year after discharge, he was admitted to Dr. Lowsley's service at Brady, New York. Dr. Lowsley wrote for the records. Unfortunately, the patient left Brady before any study could again be made and before my reports were received by Dr. Lowsley. This sympathectomy may have been successful and it may not.

Cases 9 and 10 cannot be reported as complete successes. Both operations were done upon extremely neurotic persons, who at present still have pain. In both, the pain which they have, cannot be considered renal because it is relieved by a good cathartic and a hot-water bag. Both have been reclaimed, however, temporarily, from nonproductive lives and are able to work. They have both been operated upon so recently that time alone will tell the final results.

One case, mentioned as a failure, is not reported in this series. This patient's story was typical of any of the histories herewith presented, however, during the operative procedure, the renal vein was torn and could not be repaired. This necessitated a nephrectomy. The pathologist's report showed a normal kidney. The patient is, however, relieved of symptoms.

(1) These five patients have been relieved of their clinical symptoms; namely, pain and gastro-intestinal disturbances. This still holds true. The subsequent patients have been relieved of their pain and gastro-intestinal disturbances for the most part, excepting those that have been previously discussed.

(2) Kidneys which, under ordinary circumstances, would have been removed, have been saved. This holds true today as it did in a former report.

(3) The amount of urine secreted by the sympathectomized kidney after six months is about one-fifth more than that of its operated fellow. This has been proved but is not believed to be essential as there are too many possibilities here for mistakes and it is impossible to study the secretory ability of the kidney in most patients for a longer period than a few moments. An observation of this kind would be of no value in my opinion, unless conducted over several twenty-four-hour periods.

(4) We have not denervated both kidneys in a patient. In this series one patient has had a bilateral denervation.

(5) The urine from the denervated kidney has a slightly less specific gravity than that of its fellow and these changes have continued in three cases for over a year. In one of the cases, No. 2, there was no difference in the secretion of the dye, either before or after operation, between the denervated and the normal kidney. In all the other patients, the dye from the side to be denervated has been delayed prior to operation. Shortly after operation in two of the patients, it has still been slightly delayed; in Case 1, two minutes, three weeks following operation and six months later the appearance time was the same from both the right and left kidneys. In all the other cases after denervation, our observations have shown that the appearance time has been the same, approximately, from both sides. The jets from the ureters seem to be more frequent and more

vigorous on the side operated upon, both four weeks after operation and six months later in the first three cases. The dye does not concentrate as deeply on the side operated upon, although the point of maximum concentration seems to be arrived at more quickly in all our cases. The fluid quantity in all cases has increased at the ratio of about five to four. None of these patients has had an ether anesthesia since operation and the effects of ether have not been demonstrated clinically.

In the first case, Milliken suggested an explanation of the lack of dye appearance in fifteen minutes in two instances, as excessive vasoconstriction caused by the irritation of catheterization. The return of dye elimination following sympathectomy is due to the more or less permanent relief of the vasoconstriction. Six months later, in three cases, the above observations still maintain.

These observations still hold good and are verified by the subsequent cases herewith reported.

(6) Nothing has developed as yet in any of the patients to show that the operation has any influence on the opposite or normal kidney. It is perfectly possible that some burden is relieved and that some adjustment takes place, more evenly distributing this burden. Apparently no anatomic changes have as yet occurred and they are not expected.

In one case, routine blood chemistry tests were made before and after operation and the urea was 18 mgm. before, and 14 mgm. six months later. In the other cases, the blood ureas were determined before operation and found to be within normal limits. These cases, however, bear out the experimental studies that the blood urea is not increased by operation.

These observations still hold good with the exception that the blood chemistries were checked at later periods and it was found that the operation had no bearing upon these findings.

(7) A constant preoperative symptom in all the patients was gastro-intestinal disturbance with nausea and vomiting. This symptom complex was explained by the correlation of the sympathetic nerve supply of the gastro-intestinal tract and renal pedicle. This observation is still correct.

(8) Pyelograms on all five patients prior to operation caused nausea and in two instances vomiting, with very small amounts of sodium iodid. In none of the cases after operation was this symptom complex noted at the time of pyelography. Six months later, in Cases 1 and 3, an attempt was made to overdistend the sympathectomized pelvis to ascertain if pain, nausea, or vomiting could be produced. Some pain was evidenced in hyperdilatation, but there was no nausea or vomiting. This still holds true and is verified by the new cases.

(9) In all cases, the urine from each kidney was studied and cultured before and after operation and practically no infection could be demonstrated at any time. A study of the pyelograms in all these cases reveals several very interesting things. In none of them has the nephrosis apparently increased. There has been no difficulty in passing the catheters after operation and there seems to be no evidence of kinking or stricture of the ureters as obtained in some of the cases prior to operation. This still holds true.

CONCLUSION

(1) The clinical indications for operation in this series of cases are: (a) renalgia; (b) renalgia plus nephrosis; (c) renalgia plus nephrosis and ptosis; (d) renalgia plus nephrosis, ptosis, and kinked ureter; and (e) as a preventive for the reformation of calculus in the renal pelvis at the time of operation for removal of calculi. (Two cases not in series.)

(2) The operation is simple and feasible.

(3) The results justify the procedure by: (a) relieving renalgia; (b) relieving reflex gastro-intestinal disturbances (nausea, vomiting); (c) not increasing nephrosis; (d) fixing ptosis (not suspension); (e) straightening out kinks in the ureter.

(4) The operation does not damage the kidney nor is the functional capacity of the organ for work disturbed to such a degree as to warrant serious consideration.

(5) In the last analysis the operation is certainly justifiable. In many patients it may be done tentatively as a preliminary procedure, and even though it fails, nephrectomy can always be done later.

(6) I offer sympathectomy, with fixation of the kidney as a result of adhesions secondary to operation, as a procedure in those painful types of floating kidney in which heretofore suspension by various methods has been attempted. Controversies, pro and con, on whether to suspend or not suspend disturbing floating kidneys, have raged in the medical profession from time to time. Most of these attempts at suspension have been made in an endeavor to save a useful organ and stop pain. Many of these patients have been relieved; in others, the pain and the nervous symptoms have been increased as a result thereof. A fixed, painless kidney (denervated) would answer the contradictory questions raised in this controversy by both sides.

(7) Obviously the series is too small, the time element too short, to claim dogmatically any great constructive offering in this work. There are also many possible sources of error. False observations are too easily made at times. Enthusiasm over a subject can easily become a fad. I have tried to be careful in the selection of the cases, and, in my observation and study, to record the facts. I believe renal sympathectomy has a distinct place in our armamentarium for the relief of suffering.

501 Commerce Building.

ABSTRACT OF DISCUSSION OF

Symposium on Renal Sympathectomy

Willard F. Kinney, M.D. (Philadelphia, Pa.): With the glowing accounts that have been recorded in the past few years concerning the results obtained by periarterial sympathectomy in certain sensory or circulatory derangements, one almost becomes a convert to its practical application in visceral structures suggesting abnormality of function. If denervation will act as a panacea in such derangements, then surely we have opened a new era in surgery.

One should not discredit, however, the interesting research work by animal experimentation and reported in the literature by several collaborators. The results of these experiments have opened numerous theoretical conclusions, for example, denervation for the relief of pain of almost any character in the kidney; for the relief of the various types of reflex anurias; to inhibit progressive disease of the renal organs such as nephritis and tuberculosis; for the relief of hematuria of renal organs such as nephritis and tuberculosis; for the relief of hematuria of renal origin; denervation as a prophylaxis against recurrent kidney stone, etc.

The above are some of the conditions in which theoretically at least, denervation should be tried, as Dr. Milliken brought out in his paper. Practical surgical application of sympathectomy for the relief of pain of renal origin, the so-called nephralgias, and pain as a result of the small hydronephroses, has been carried out by Dr. Hess in this country and by several French surgeons who have decapsulated and suspended the kidney. Their results have been promising and encouraging, whereas Dr. Hess has depended on sympathectomy alone for his results, and deserves credit for his technic in denervation. Doubtless other surgeons will soon follow the technic described by these men in this branch of surgery.

According to the investigations of Cushny (1917), Milliken and Karr (1925), and Gubergritz and Itschenko (1926), the function of the renal nerves is essentially vasomotor.

The splanchnic supply to the kidney includes many vasoconstrictor and few vasodilator fibers but no secretory fibers. Since it is known that splanchnic stimulation results in constriction of the renal blood vessels, with diminution of the volume of blood flowing through the kidney and diminution in the output of urine, and section of the splanchnic nerves results in dilatation of the renal blood vessels with increased urinary output, it seems unnecessary to assume the existence of renal secretory fibers in the splanchnic nerves. It has been definitely proved by the experiments of Milliken, et al., that denervation of the kidneys is not incompatible with life.

Claude Bernard (1859) showed that secretion of urine by the affected kidney is increased following unilateral section of the splanchnic nerves in the dog. Eckhard confirmed this in 1869; Grek, in 1912; Rhode and Ellinger and Jungmann and Meyer in 1913, as well as the more recent research workers. Carrel and Guthrie, in 1906, transplanted the kidneys of one dog into another, and kept the latter alive for many days after removal of its own kidneys. Clearly the kidney function in this case was carried out in the absence of direct nervous influences.

Dederer, in 1920, homotransplanted a kidney and an ovary from one dog to another of the same litter. The dog with the transplanted kidney died of distemper 26 days later. Examination of the transplanted kidney showed that it reacted to the severe constitutional infection, the distemper, in a manner similar to that of the animals own organs. The transplanted kidney could have had no nervous connections, yet, although the animal had two kidneys of its own, phenolsulphonephthalein appeared in the urine 2 minutes and 40 seconds after its intravenous injection.

Quinby, in 1916, reported the results of many experiments carried out on dogs in which the kidney on one side was removed and then reimplanted by anastomosing the severed vessels and ureter. According to Quinby, stripping the renal vessels of nerve fibers is not sufficient to insure complete denervation of the kidneys because a few nerve fibers are actually within the vessel walls. Even after the arteries enter the renal parenchyma, nerve fiber bundles may still be observed microscopically along their walls. In favorable microscopic preparations, nerve fibers may be observed in relation to arterioles and capillaries.

Renner, in 1924, described afferent nerve-fiber terminations in the musculature of the renal pelvis, the adventitia and media of the renal vessels, and the renal capsule. The nerve fibers in the parenchyma of the kidney are mainly unmyelinated fibers of small caliber. Renner also observed very few small unmyelinated fibers in the renal parenchyma, although myelinated fibers occur in great abundance in the region of the renal calices and in the renal pelvis. According to Habler (1922), the renal calices are richly supplied with unmyelinated nerve fibers which terminate in relation to the musculature including the smooth muscle fibers that he claimed to have observed in the renal calices above the sphincter papillæ. The technic described by Dr. Hess, of stripping the nerves from the vessels as far back as the abdominal aorta and the vena cava, brings up the possibility of nerve regeneration. In reviewing Cajal's work concerning nerve reunion and regeneration, it is to be assumed that regeneration takes place if the ganglion is not destroyed.

In 1917, Quinby, in a third series of experiments, tested the response of the denervated kidney to intravenous injection of hypertonic solutions of sodium chlorid urea, and caffein and found that the reactions of the normal and the denervated kidney to these solutions were practically identical.

These findings once more suggest the absence of secretory fibers to the kidney.

In Bellido's experiments, in 1917, denervation of one kidney resulted in moderate polyuria from that side which was still further increased by injection of saline solution. Yet he reported that when both kidneys were denervated there was polyuria for about two weeks, then suppression, and the animals died in coma. On the other hand, Boeminghaus (1923) reported that six animals, in which he had denervated both kidneys by

tearing away all the fibers of the renal plexus and painting the hilum and pedicle of the kidney with a concentrated solution of phenol, lived until they were killed for autopsy nine months later. Marshall and Kolls (1919-1920) corroborated the findings of Quinby and later (1925) Milliken and Karr further substantiated the results of the previous investigators.

Milliken afforded additional evidence that denervation of both kidneys is not incompatible with life, and that the denervated kidneys are able to withstand exigencies more rigorous than are likely to occur under ordinary conditions of life does not prove the absence of secretory fibers in the kidney. Furthermore the experimental data in hand are not wanting, which have been interpreted as indicating that true secretory fibers play an important rôle in the nervous regulation of renal secretion.

The experimental results obtained by Asher and others strongly suggest that renal secretory activity is influenced to some extent by nervous impulses acting directly on the kidney cells. The output of water and the solid constituents of the urine is, however, determined in so large a measure by the volume of blood flowing through the kidney that the exact rôle of secretory nerves, if the kidney is supplied by secretory fibers, is not easily determined. As Dr. Milliken stated in his paper, since denervation of both kidneys, in experimental animals, is not necessarily followed by untoward results, and in view of the volume of experimental data which seem to indicate that the renal output is determined solely by the volume and content of the blood flowing through the kidney, the burden of proof must still rest with those who maintain that the kidney is supplied by true secretory fibers.

The influences of reflex and psychic factors on the renal function should not be overlooked. Many times renal inhibition has occurred when overdistension of the urinary bladder takes place, so-called vesico-renal reflex. Or inhibition of the renal secretions in ureteral stasis or uretero-renal reflex. Polyuria as a result of an epileptic attack or a severe case of migrane is not uncommon; it may also accompany certain psychic states such as expectancy or fright. As Kuntz in his latest work on the autonomic nervous system states, doubtless the impulses involved in these conditions are mediated through the diencephalic autonomic center and the efferent pathways leading from these centers to the cells of origin of the splanchnic nerves.

In considering normal urinary excretion it seems necessary to acknowledge the vast importance of the dependence of one part of the kidney mechanism upon another, and the readiness with which one part takes up the work of another; remembering at the same time that there is a high degree of individuality in the renal cells themselves so that the degree of functional activity, or of implication by disease may vary greatly in different parts of the same organ.

Although nervous influences play an important rôle in renal secretion, this rôle should be regarded as only regulatory. Furthermore, it is dependent, in a large measure, on the vasomotor control of the renal blood vessels exerted through the sympathetic nerves.

The influence that denervation of the renal organs will have on the function of the renal cells, in their selective powers on the various constituents of the blood, for example, in retarding pathologic changes in the kidneys or the prevention of recurrent renal lithiasis, future experimental studies will reveal.

Renal sympathectomy as a definite surgical procedure of the future will depend greatly on the continuation of the commendable research and clinical work that have already been accomplished.

EDWARD S. KEYES, M.D. (New York City): The papers of Drs. Hess and Milliken and the discussion open an extraordinarily wide horizon. It takes one back to the days when Dr. Edebohls cured everything by decapsulating the kidneys. Presumably he did a partial sympathectomy in doing a decapsulation, for if a complete decapsulation is done, it does a good deal in the way of denervation. Six years ago, before the International Urological Society, this was discussed. As the result of this discussion, I said I would never do a sympathectomy. These papers and the discussion have caused me to change.

There are many persons who have sympathectomy done, just as there are hundreds of them all over the country today who have already uretory dilations with temporary benefit each time.

BENJAMIN A. THOMAS, M.D. (Philadelphia Pa.): I am much more interested in the so-called theoretical indications, described by Dr. Milliken, because I am not at all sure that the indication of small hydronephroses is really a true indication for this operation. I believe in those cases there is some other cause and some way of remedying the cause rather than by resorting to denervation, because in the cases reported in the *Journal of Urology*, 1922, of which there were six, in every instance the kidney was suspended and denervated. Most of those cases were hydronephroses, and of those, there were two admitted failures, which is one-third failures.

Dr. Hess admits four failures out of ten, which is not quite as good. In his work, however, he has not suspended the kidneys, as I understand it. Therefore, it would seem that, perhaps, there is something in suspension of the kidney in these cases, particularly if there are indications of hydronephrosis.

I say that with more conviction because of my own experience with several of these during the last three or four years. I have done two or three nephropexys and for very slightly prolapsed kidneys. I admit they were not prolapsed more than the pelvis to the third lumbar vertebræ, for instance, with very little hydronephrosis; and yet, in every case, the patient has been completely relieved of pain by simple suspension and no denervation whatever.

Another thing should be considered, and that is when you are doing this operation, for instance, a hydronephrosis produced by some obstruction either by virtue of a nephroptosis or some obstruction, that even though the patient is relieved by the operation that will not necessarily prevent destruction of that kidney by gradually and insidiously developing hydronephrosis. Therefore, it seems that hydronephrosis, to a very serious extent, threatens the destruction of the kidney in those instances, if not checked up, even though the pain is completely relieved by the denervation.

LORENZO F. MILLIKEN, M.D. (Philadelphia, Pa.): In answer to Dr. Keyes' question, if the kidneys are decapsulated there is denervation to a certain extent, although this cannot be nearly so complete as when the nerve fibres are torn away from the renal pedicle. Paricta nerve fibers certainly do enter the kidney through the capsule but so far as is known only to a limited extent. I do not believe that we had completely denervated the kidney in any case, since some of the nerve fibers run through the vessel walls, and the only way that we could get complete denervation would be by also severing the vessels. This was done by Dr. Quinby, of Boston, in his experimental work. Dr. J. E. Sweet and I did this on a few dogs Dr. Quinby had observed that the effect of denervation in his patients lasted only about three weeks after which function became normal

again. We found that the same was true for our patients if the vessels had been severed then reanastamosed, but further observation showed there was gradual atresia of the arteries at the site of anastamosis with final complete occlusion of the vessel. This resulted in great atrophy of the kidney, so that this method was not practicable for carrying on the experiments.

Thomas C. Stellwagen, Jr., M.D. (Philadelphia, Pa.): The question of the probability of regeneration of the nerve tissues naturally arises. When I was interested in general surgery they used to do the numerous operations for resection of the inferior maxillary nerve from the canal within the mandible. I recall one man who was operated on fourteen times for tic douloureux, and the nerve regenerated, and finally they got to the gasserian ganglion which was removed. Some cases have been recorded in which there has been a regeneration of nerve tissue, so much so that a number of the operators, Dr. William W. Keen, the first that I recall seeing, put rubber tissue in so as to pack the canal to prevent a regeneration of the nerve, and in one or two instances there were reports that the nerve tissue had regenerated even about this rubber.

The question arises whether the subsequent capacity of the kidney to carry on without its nerve stimuli is not the case there. It has been turning through my mind as to how much nerve tissue possibly regenerates. Something certainly must occur in the nature of regeneration, and that, in other words, a person is broken of a habit of neuralgia by this interval of relief.

Dr. Milliken (in closing): One result of the work, which I had barely time to mention in the paper, but a most interesting feature of it, was that after 18 months to 2 years all the dogs that had been denervated showed restoration of nerve control to the kidneys. If a normal dog is deeply anesthetized with ether for at least 30 minutes, there will be complete cessation of kidney function so far as the elimination of indigo carmine is concerned; nor will any dye appear so long as the anesthetic is continued, but it will appear as soon as the animal begins to struggle in coming out of ether. We were able to show this before the American College of Surgeons, in Philadelphia.

If the kidneys have been denervated, ether anesthesia does not inhibit function, for when the dye is injected it appears in normal time (3 to 5 minutes). By using this test from month to month, we were able to tell when nerve control of the kidneys was resumed, for we then again had no appearance of the dye during continuance of the anesthetic.

All the dogs but one were killed after three years, without our knowledge, and we are having studies made on a single kidney of this dog to determine, if possible, how reinnervation occurred.

Case Reports *

ACUTE NONSUPPURATIVE INFLAMMATION OF THE HIP JOINT

J. FRED WAGNER, M.D.
BRISTOL, PA.

This most interesting and unusual case greatly exemplifies an old dictum of our profession in pediatrics that one should never treat rheumatism in children unless every other possible malady had definitely and positively been ruled out. This case is also worthy of study because of the difficulty in diagnosis that it presented to us.

It is the case of a female, twenty months of age, the fourth in order of birth, natural born, and up to the time of this illness, a perfectly healthy, normal, growing child. The parents are both living and well. The three older children are also well and healthy.

The child began complaining of colds, running nose, irritability, slight coughing, and constipation. There were afternoon elevations of temperature.

During this period of approximately eight days, there were one or two days when she seemed comparatively well. On the others, however, she persisted in fretfulness, coughing, irritability, and restless sleep. No evidence of pain was noticed by the mother.

Anorexia was a persisting symptom and very noticeable to the mother because of the marked contrast in the fact that the child had always had a good appetite.

At the end of the week, the mother brought the child to my office for examination and treatment.

The child had a morning temperature of 101°F., a persisting nasal discharge, and a marked irritability in temperament. The manipulation and handling during this examination seemed to annoy the child more than usual; there was no swelling apparent anywhere in the child's body nor did there appear to be any stiffness in any of her joints.

A diagnosis of influenza was made and the child ordered taken home, put to rest in bed, with fresh air and isolation. A week followed with no improvement in the child's condition.

One morning, while bathing the child, the mother noticed the right thigh to be flexed at right angles to the abdomen with the knee so flexed that the foot rested flatly on the bed, with some swelling in the region of the right hip joint.

These findings caused the mother at once to bring her child to my office again and upon not finding me at home, sought the advice of another physician who told her to take the child home, prescribed, and said he would see the child the following day, which he did.

On the third day of his attendance, the child was moved to a hospital. The tissues surrounding the hip were still more swollen, movement very much more painful, the child very irritable, restless, and crying almost continuously.

A roentgenogram of the right hip was taken, with negative findings. The abdomen had by this time become very much swollen and tympanitic. The tissues of the thigh had become swollen almost to the knee.

The child was again returned home and massage and manipulation of the rigid hip joint instituted. After the lapse of another three or four days with no change in the child's condition, she was admitted to a hospital in Philadelphia in which she was again put through a rigid examination and another roentgenogram was taken and reported negative. A marked leukocytosis had developed by this time.

The child had become greatly emaciated, the temperature remained high throughout the 24 hours, the limb remained flexed, rigid, and extremely abducted, the swelling had become more pronounced in the region of the hip and adjacent tissues of the abdomen and considerable swelling extended to the middle of the back and well down to the knee and involving the vulva. Here again manipulation and massage were introduced as the treatment of the condition.

* Read before the Section on Pediatrics of the Medical Society of the State of Pennsylvania, Erie Session, October 3, 1929.

No improvement was yet noticeable at the end of a week. The parents decided to take the child home and summoned a third physician who made a diagnosis of pus along the femur and advised immediate removal to a hospital for surgical intervention.

Having just come from a very unsatisfactory experience in the hospital, the parents declined the suggestion and summoned me a second time.

At this time the child was profoundly emaciated, and would scream frantically upon my approach to her bed, a child who had not had any sleep for days, and who practically refused all food. An examination was almost impossible because of the pain that evidently was present at the mere touch of her body. The tissues around the right hip were swollen and boggy with a typical purplish discoloration suggesting the possibility of pus.

The thigh was rigidly flexed at right angles to the abdomen and the limb very decidedly abducted so that the foot rested on its outer edge on the bed. The left leg was freely movable and without symptoms. The swelling had traversed two-thirds of the surface of the abdomen. The abdominal muscles on the right side were intensely rigid. The thigh was still very much swollen and the swelling extended completely to the knee joint. The temperature at 4 p. m., the time of this examination, was 104.6° F.; pulse, 140; respiration, 40. The clinical picture was that of a child extremely ill with an acute infection of some character with several serious possibilities: (1) a psoas abscess; (2) an osteomyelitis of the femur; and (3), pus in the glenoid cavity of the hip joint.

Under these circumstances and in the face of what had happened during these several admissions to hospitals, in spite of treatment, the symptoms became more grave and severe, there was little left for the writer to do other than to treat the case symptomatically.

The child was put to rest, the limb supported on pillows, colonic irrigations were begun. The mother commented that the treatment outlined was diametrically opposite to what had been outlined previously. The other had so utterly failed that it was only common sense to pursue another course.

In a very short time after the child was given complete rest, she began to show decided improvement in her condition with a subsidence of all symptoms and physical signs. At the end of two weeks her temperature had reached normal and, in every way, she was markedly improved.

At this juncture, the child developed an attack of chickenpox which in no way interfered with the progress of her convalescence, except for a few days of anorexia. By the time the attack of chickenpox had subsided, she began showing slight functioning of the right hip and thigh, though manipulation still caused the child to scream, likely, some from fright, but mostly from pain produced by the manipulation.

The swelling of the tissues around the hip joint had not entirely disappeared and so, after a lapse of another week, a third series of roentgenograms were taken with the thought of determining if any actual destruction of bone tissue had occurred within the hip joint, because by this time it was evident that the hip joint had been the center of this violent infection.

The muscles over the right abdomen still remained rigid, therefore, we still held in mind the possibility of psoas involvement.

We felt that a roentgenogram would definitely reveal any abnormality in the spinal vertebra as well as in the hip joint.

These series of roentgenograms again failed to show any actual pathology in the hip joint or disease of the spinal vertebra. An orthopedic surgeon examined the child at this time and confirmed our conviction that this was an unusual case of hip joint disease in which violent symptoms were likely aggravated by manipulation and massage, but yet which never resulted in any destruction or suppurative process of joint structures.

The child's condition from this point on improved rapidly. Within four months from the beginning of the illness, she began to extend the thigh of her own volition and willingly assumed an erect position and put some weight on the limb.

Time passed and the natural improvement has continued. In the months that have passed since this experience occurred, the child has returned entirely to normal and has continued growing in every way.

Two years have elapsed with no recurrence of any kind and a very healthy youngster continues to enjoy life.

435 Radcliffe Street.

INCREASED INTRACRANIAL PRESSURE IN A NINE-YEAR-OLD BOY

THOMAS H. WEABER, M.D.
ALLENTOWN, PA.

Francis B., aged eight years, has a negative family history, excepting his father is a heavy drinker. Francis is the fourth of six children, and had measles when he was four years old.

In October, 1928, headaches had started. These were usually in the mornings and, at first, once a week, then twice a week. He usually vomited during these attacks. If he slept until dinner time, he was comfortable during the remainder of the day. He did not have convulsions.

At Christmas, 1928, he had an attack of tonsillitis.

On Jan. 14, 1929, he was admitted to a local hospital. At this time a sort of staggering gait caused him difficulty in walking. Soon after admission, his eyesight began to fail. He was referred to the ophthalmologist who reported that the disks were clouded and swollen The first roentgenogram suggested intracranial pressure on account of the widening of the sutures of the skull. Blood and urine examinations were negative. On Feb. 12, 1929, he was discharged, unimproved.

He was brought to my office, Apr. 7, 1929, and a neurologic examination suggested a brain tumor. He was sent to Dr. Frazier's clinic at the University of Pennsylvania where, after being closely observed and examined, the diagnosis was made of a tumor in the posterior fossa of the skull. He was operated on Apr. 29, 1929, at which time a glioma of the fourth ventricle was found and partially removed. The tumor was of such a nature and size that its total removal was out of the question. Enough, however, was removed to relieve the ventricular obstruction. The operation was a tedious one of four hours and the patient had two collapses on the table. The first called for adrenalin; in the second, his mother's blood helped in the crisis.

On June 18, 1929, he was given x-ray treatment and discharged. Vomiting ceased after the operation and he has not vomited to this date. From Aug. 5 to 15, 1929, he received a course of x-ray treatments and his condition is quite satisfactory. There are no positive cerebella signs and there are no signs of a recurrence of the growth. He is almost blind and it is doubtful whether vision can be restored.

211 North Eighth Street.

ASCARIDIASIS SIMULATING APPENDICITIS*

GEORGE W. OVERHOLSER, M.D.
AND
CALVIN B. RENTSCHLER, M.D.
READING, PA.

On the evening of April 6, 1929, a boy, 4 years old, was sent to the Reading Hospital by his family physician, with the diagnosis of acute appendicitis. The history given was that the same day at about 10 a. m., following a fall on the abdomen, the patient began to complain of pain in the abdomen. Shortly after this there was slight vomiting, the vomitus consisting of a little breakfast food. The pain in the abdomen became progressively severe and the family physician was called. There was no history of any previous illnesses except measles.

The patient was admitted to the pediatric service. The temperature was 101.2° F.; the pulse, 150; and the respiration, 40. The child was very well nourished but quite toxic and lethargic. The eyes reacted to light and accommodation. The teeth were in good condition and the tonsils were slightly hypertrophied. The tongue had a moderate white coating and there was a slightly fetid odor to the breath. Chest expansion was good and no râles were heard. Heart sounds were clear. The abdomen showed moderate distention with marked generalized tenderness and rigidity probably more marked over the right lower quadrant. Peristalsis was feebly heard by auscultation. There was no palpable mass. The digital rectal examination was negative, as were also a roentgenogram of the chest and a urinalysis of a freshly-voided specimen. The blood count showed a hemoglobin of 80 per cent; erythrocytes, 3,670,000; and leukocytes, 15,450. A differential cell count showed a polymorphonuclear count of 89 per cent; small mononuclear, 7 per cent; and large mononuclear, 4 per cent. The diagnosis of acute appendicitis was made. A surgical consultation was requested and two surgeons saw the patient and thought there was no doubt about the diagnosis.

At 11 p.m. under ether anesthesia a right rectus incision was made. As soon as the peritoneum was opened considerable clear amber colored peritoneal fluid escaped. Upon inserting the fingers into the peritoneal cavity they came into contact with ribbed, firm, and heavy masses, which, on further examination, were a large part of the ileum heavily weighed down with round worms. At one place approximately 18 inches of ileum were sharply kinked and markedly injected. At several places there was a yellowish, plastic exudate. No mass or cluster in the bowels were found anywhere. The kinking in the bowel was relieved. Since a definite kinking of a part of the ileum was found which could easily be released and, further, because the nematodes were evenly distributed through the ileum without a definite jamming or clumping, it was thought unwise and unnecessary to do an enterotomy. The appendix was easily brought up and removed by cautery. It appeared grossly normal but contained a small amount of fecal matter and 8 pin worms. The abdomen was closed without drainage. The child was immediately given saline by hypodermoclysis, and glucose and sodium bicarbonate by enteroclysis. There was a surprisingly satisfactory convalescence and the patient was out of bed within 3 weeks, with the wound entirely healed. Anthelmintics were administered 3 days after the operation and within a short time 52 round worms were passed by rectum. Calomel and santonin, a half grain of each, for three doses, at intervals of twelve hours were used. This was always preceded by saline catharsis, enemas, and liquid diet. Six courses of this treatment were given over a period of 2½ months. No toxic symptoms appeared and the patient was always happy and cheerful and became quite a favorite. Repeated stool examinations were always positive for ova and, at the time the patient was dismissed, occasional ova were still found.

* From the combined pediatric and surgical service of the Reading Hospital.

309 North Ninth Street.
104 South Sixth Street.

ABSTRACT OF DISCUSSION OF CASE REPORTS

J. Gibson Logue, M.D. (Williamsport, Pa.): This morning Dr. Sinclair told me about an operation on a child in Philadelphia, and I am going to ask him to tell you about it.

John F. Sinclair, M.D. (Philadelphia, Pa.): This is similar to the last case reported.

A child of foreign parentage was brought into the Graduate Hospital, Philadelphia. The child was in pain, and there was a marked tenderness and rigidity in the lower quadrant. The temperature was raised, but I have forgotten just what it was. There was a leukocyte count that was increased, and everything indicated a diagnosis of appendicitis.

At the Children's Hospital, children over three years of age are not admitted, so the child was sent to the surgeon at the Graduate Hospital and operated upon. The intestines were full of round worms. The appendix was removed, the incision closed, and the child made a very speedy recovery. The child was then referred to the physician who has charge of the department of parasites, and he found that every member of the family was full of round worms. They had a tremendous time clearing it up.

George W. Overholser, M.D. (Reading, Pa.): We did not operate illadvisedly, the case seemed so clear-cut that everybody was sure it was appendicitis. Probably if an examination of the stool for ova had been made, they might not have been so positive. The fall on the abdomen, as given in the history, doubtless had something to do with bringing on the symptoms. The ileum was heavy and the child had fallen that morning. In the operation, it was noticed that the bowel was kinked.

Vincent T. Curtin, M.D. (Philadelphia, Pa.): About six months ago a patient came in to the Philadelphia Hospital for Contagious Diseases and there were signs of laryngeal diphtheria. Upon examination it was revealed there was no membrane in the larynx, and no evidence at all of diphtheria. The child continued to have signs of laryngeal obstruction and died. Upon postmortem a large round worm crawled out of the larynx.

We regretted this very much, because there might have been something done to save the child. There was no question in our minds but that the obstruction was due to the round worm.

"Even in populous districts, the practice of medicine is a lonely road which winds uphill all the way, and a man may easily go astray and never reach the Delectable Mountains, unless he early finds those shepherd guides of whom Bunyan tells, Knowledge, Experience, Watchful, and Sincere."—*Osler.*

Sex and the Social Struggle

Henry Ford and his colleagues in industry were described as the "innocent destroyers" of the old-fashioned sexual morality.

Modern American industrialism makes impossible a normal and legal sex life for most young people, members of the Friendship Liberal League were told at a meeting held January 12.

Unable to marry at the normal age, young people nowadays are forced into prenuptial sexual unions or, if married, to practice birth control, said the speaker. The chief cause for this change of sexual practice in recent years is ascribed to the growth of industrialism. The speaker further stated "introduction of big business methods into nearly all phases of American economic life has reduced the average man's opportunity for acquiring money enough to support himself, a wife, and family. Chain store systems have driven small merchants and dealers out of business by the thousands and forced them to accept meager salaries. Their entrance into the salaried classes has reduced wages all along the line. Girls, unable to get married, go into business and force male salaries down still further. When both they and the young men see their youth slipping past with the goal of financial independence still far away, they decide to live together without being married. Even in farming regions the sexual customs have changed. The sons of farmers can no longer break into the agricultural field. If they stay on the farms they do so as hired men. Hired men cannot afford to marry. Every farmer's daughter cannot marry a successful farmer. That leaves only the hired men as prospects. Then happens what occurs in the cities under similar circumstances. They pair off, only more furtively than in the cities.

Industrial favoritism is generally conceded to be the cause of the farmers' economical plight, so on the shoulders of Henry Ford and other big manufacturers' should be placed the blame for the destruction of old-fashioned sexual standards. Of course, Ford and the others were innocent of any such intentions, but they are responsible just the same.—*Philadelphia Record.*

The Mystic Signs of Medicine

When a doctor makes out a check, he writes the amount both in words and figures. Otherwise a bank wouldn't cash it. But when he writes a prescription he denotes the amount by a queer little curlicue and then it is up to the nurse or chemist to decide what it means. If the curlicue looks something like the letter Z, then one teaspoonful is meant. If the Z has an extra turn on the top it stands for eight times as much. Thus a blot or a speck of dirt or even poor penmanship may make the symbol for a dram very easy to confuse with the symbol for an ounce.

Inasmuch as such a confusion was recently followed by the death of a patient, why should not physicians in future be required to take a precaution with their prescriptions similar to that which they take with their checks?

Many of the medical fraternity do love to surround themselves with a certain amount of voodooism, no doubt for the psychological effect. But when ordering a dose of a dangerous drug it would be the part of prudence to indicate the quantity in the vernacular as well as by an international symbol. If the dose is a dram, why not write it down as a dram and not leave a patient's safety dependent upon the accurate deciphering of whether a sometimes hastily-written hieroglyphic represents a teaspoonful or an ounce? Or, if it be essential to mystify the laity, recourse could be had to cubic centimeters, provided that the number to be taken is written out in words as well as figures.—*Toronto Evening Telegraph.*

Operation Forbidden by Mother Saves Boy—Law Invoked When Parent Refuses Consent

Despite the protests of his mother that God gave her her son and if the Lord wanted him back surgery should not be allowed to interfere, a 13 year old boy was operated upon at a Brooklyn hospital in June, and saved from almost certain death, it was learned from Justice Peter B. Hanson of the Children's Court and Superintendent Charles H. Warner of the Brooklyn Children's Society. Justice Hanson and Mr. Warner would not reveal any information that might lead to the identification of the mother or the boy because of the secrecy imposed by statute upon Children's Court matters. They said that it was the first occasion upon which the sections of the Children's Court Act which allow a child to undergo an operation by court order, even against the wishes of the parents, were used.

The boy, it was explained, developed pleurisy last January. His mother, said to be a widow in comfortable circumstances, nursed him constantly, but he grew steadily worse. The matter was called to the attention of Justice Hanson and Mr. Warner in the hope they might do something to convince the woman that surgical aid for her son was imperative. Justice Hanson looked up the law and found a section permitting the Children's Court, after a hearing, to order an operation on a child, against the parents' will, if the child were one classed as "neglected" by the statute. Another section, he found, classed a "neglected child" as one whose parents refused medical or surgical aid.

A hearing was ordered and the boy's mother appeared. She told Justice Hanson that she had taken every care of the boy, but her faith in the Lord would not allow her to agree to an operation. She said she felt she had no right to complain if the Lord called upon her to give back the boy to Him.

Five physicians testified that an operation was imperative and that unless it was performed the boy would almost certainly die. Justice Hanson signed the order and the boy was taken to a hospital, in which the operation was performed upon his chest. The boy was reported to be recovering.

The mother also stated that she herself had had a similar affection some years before, and the logical suggestion is that both are of a tuberculous nature. The case illustrates the legal phase of childhood in that the State must protect the future citizen, even over-riding the narrow and unscientific opinion of believers in cults to the detriment of a child's welfare, if not danger to his life.

Some years ago a boy of nine suffered a compound comminuted dislocation and fracture of the elbow in the Smith Memorial Playhouse, Fairmount Park, Philadelphia. The father of the child, a Christian Scientist, refused to have surgical attention given to the boy whereupon the superintendent, a practical man who was a firm believer in the Rooseveltian idea of "hit first and talk afterward," took it upon himself to have the boy admitted to the Lankenau Hospital, where proper surgical attention was given. The boy made a good recovery.

While such cases are close to the borderline of State medicine, individual rights of citizens and the like, the duty of the State to the helpless child transcends the narrowness of action on the part of those who believe in cults.

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Editorials

TRISTATE MEDICAL CONFERENCE

In this number of the Journal will be found a report of the meeting of the Tristate Medical Conference held in Philadelphia, May 24.

The subject for discussion was "Medical Practice Acts, State Boards, and Licensure in the Healing Arts." The paper was presented by Dr. Ross V. Patterson, dean of the Jefferson Medical College, and was based upon nearly 25 years of daily experience and contact by Dr. Patterson with these various activities.

As stressed by Dr. Patterson, state boards of medical examiners are not well constituted or organized to direct medical education, but their function appears to deal with the granting of licenses, prosecuting, discipline, etc. It would seem that the time is ripe for a revision of the medical acts governing all the state boards of medical examiners and their reorganization. The medical profession must take a very active part in these revisions and reorganizations.

The object of Dr. Patterson's paper was for the most part to deal with a discussion of a medical practice act designed to meet present conditions of medical education, licensure, and medical practice. He considers it is no longer necessary for the boards to examine all the recent graduates of approved American medical schools, and nearly all present concurred in this thought.

Dr. Patterson states "that professional boxing is better regulated in the Commonwealth of Pennsylvania than is the practice of medicine, and that considerably more money is at the disposal of the boxing commission for the enforcement of its regulations than is placed at the disposal of the board of medical examiners."

In regard to reciprocal relations existing between state boards, Dr. Patterson believes that "The issuance of a license should depend upon the qualifications of applicants; and not the existence of an agreement the results of a bargain between two boards. Bargaining with consequent retaliatory measures of reprisal is unfair to applicants and not in the interests of the public welfare." The deplorable condition now existing between Pennsylvania and New Jersey for the past several years was cited, and the hope was expressed that the Pennsylvania Board would soon find a way to eliminate this unfortunate situation.

It was of particular interest to the Pennsylvania group to hear Dr. John E. Jennings of Brooklyn state, "that of the boys who come to us for internship and for practice, those who are the best educated and properly trained come from Philadelphia." This is a great tribute to the medical schools of Philadelphia.

It is also of interest to note in the discussion of the paper, almost unanimity of opinion of almost all the featured topics. The Grievance Committee of New York State has shown commendable results, and such a committee surely should be operative in all the states.

MENTAL HYGIENE AND THE GENITO-URINARY SPECIALIST

The genito-urinary specialist bears a very dependable relationship to mental hygiene. As a syphilographer, he is first to come in contact with those suffering from a spirochetal infection, an infection which if untreated plays havoc with the nervous system. Furthermore, it has long since been recognized that diseases of the genitalia are associated with marked psychic apprehension even to the point of depression. Further, there is a third distinct group of phobiacs in whom there is no syphilitic involvement or venereal disease of any kind.

In the first group there has arisen considerable discussion from the etiologic standpoint, as well as from the neuropathologic standpoint, as to why one syphilitic weathers the storm without neurologic involvement, another develops cerebrospinal syphilis, and the third develops paresis. This has not been sufficiently clarified other than there might be a difference in the spirochetal strain or there might be a difference in the form of medication used. Be that as it may, there is evidence that syphilis accounts for approxi-

mately ten per cent of all admissions to our hospitals for mental diseases.

While it is generally conceded that syphilis, per se, is a preventable disease, we are hardly in the position to say that skillful handling of syphilitics will prevent entirely all neurologic involvements. We have sufficient data, however to place the syphilographer on guard as to the early involvement of the nervous system, such as pupillary changes, changes in reflex, psychic reactions and spinal fluid changes; and to emphasize the importance of vigorous medication in these cases and the necessity of long continued observation with frequent laboratory checks before dismissing the patient as arrested or cured. The old story that postneurologic conditions manifest themselves fifteen or twenty years after the lesion, has yielded to the more modern point of view that the meninges. cord, and brain may be involved early in the disease. It behooves the syphilographer, therefore, always to bear in mind early neurologic involvement, and on the first evidence of such involvement the responsibility of the future treatment should be shared with the neuropsychiatrist; or preferably these patients should be referred to the latter specialist for further treatment.

The second group with psychic reactions not dependent on gross pathologic changes in brain and cord, such as fear, apprehension, depression, even to the point of suicide, are also problems to be met by the genito-urinary specialist. For these he will find a mental hygiene program exceedingly helpful, and this program could be best mapped out with the aid of the neuropsychiatrist.

The third group of so-called phobiacs come wholly within the province of the neuropsychiatrist. Before referring such a patient, however, to the neuropsychiatrist, the genito-urinary specialist would do well to make such examination as would satisfy the patient that his negative findings are based on scientific procedures of examination.

BUSINESS ABILITY OF MEDICAL MEN

The custom is entirely too common of charging medical men with lack of business ability and enterprise, and the charge too often goes unrefuted or the plea of guilty is too readily offered. The pursuit of his profession and adherence to an established code of ethics, it is true, tend to make the physician more scrupulous and more lenient in his dealings with his fellows, but that he is deficient in the higher and finer business instincts cannot be successfully maintained. Bartering, the keeping of accounts, the enforcement of collections and the like are often irksome to the professional man, with their resultant material sacrifices. While the average income of medical men may be smaller than that of workers in other fields, it is doubtful if failures are more numerous among the practitioners of medicine.

WHAT MAKES A HOSPITAL?

When one makes contact with hospital communities in a large cross section of the country, one is necessarily struck with the hospitals per se; but the lasting impressions are the tangible conclusions as to what the citizens think of their community hospitals. The answers are many and varied.

In the first place one has to discount the ballyhoo of the ardent chamber of commerce, whose business it is to boost all civic agencies in the town; of the service clubs; and the go-getters. One must eliminate the knockers and so on, and study the hospital; its site, and construction; its organization; its management, equipment, and staff; and its cost; then too, one must consider the care of the patients in the hospital and must converse not only with relatives of patients and with the patients themselves, but also with the personnel.

Judged against such a standard plus theoretical and practical standards of the College of Surgeons and state experts, etc., many a place with a gilded dome reflects its worthy brilliance—conversely many such a dome crumbles in the dust. On the other hand, many a building plain in character, less sumptuously administrated, but plainly and sufficiently equipped, through its kindly care and scientific treatment has engraved itself into a community in such an indelible way that rust cannot corrupt nor time efface. To learn the secret of loyalty and the type of service in these institutions would be a greater reward to the physician, the surgeon, the administrator, than studies abroad or surveys of magnificent architecture and administrative charts.

So then as we evalue these institutions let it be in the light of their newness, their philanthropic wealth, their management and administration, the cost of care, their professional skill with the equipment available, their propaganda, the reports of patients and their relatives and friends, as well as of the personnel, plus the sense of the sum total of these which reflects from an innate structure, a living, breathing personality, which although living in ether and iodoform, permeates the ivy-covered walls of moss

and stone to extend to those who enter its portals, the comfort of humane and scientific understanding; and to their relatives consideration and kindness backed up with a well-trained, humane, loyal personnel.

Persons necessarily visit the hospital for several reasons: to give birth to their babies; to find out what ails them; to be treated and cured. Despite all efforts (while it is not generally known) thousands pass from its portals into eternity. It may be truthfully said, therefore, that it takes a very big personality to reflect this and all these; but the hospitals that have it are those that live in good repute of their respective communities—the hospial with a personality. Think it over.

GRAND JURY FREES ABDUCTORS OF FEEBLE-MINDED GIRL

One of the most flagrant miscarriages of justice in recent years was that of the freeing, by the Schuylkill County June Grand Jury, of John Riddell and Albert E. Wilcox, who conspired and aided in the escape of Lillian Richards, a feeble-minded girl, from the Schuylkill County Hospital for Mental Diseases, Schuylkill Haven, Pa. Prosecution had been brought by Dr. W. G. Bowers, superintendent of the institution.

The absence of the patient from the institution was discovered during the afternoon of May 21, and it was found that the window guard close to where the patient slept had been unlocked. A female attendant who is employed on the second floor recalled seeing an automobile drive away from the window from which Lillian made her escape. This automobile was later positively identified by the attendant as the one belonging to Albert E. Wilcox, of Port Carbon.

Suspicion then fell upon a former employee by the name of John Riddell, who was known to be intimate with the patient, and who was seen several weeks before the escape standing at a window talking to the patient. The State Police and the Wilkes-Barre police were notified, as Riddell was a resident of Wilkes-Barre. On May 26, word was received from the Wilkes-Barre police that both Riddell and the girl had been located in Wilkes-Barre. They were returned to Pottsville by the State Police and a hearing held before Squire Faules. Riddell was sent to the county prison and the patient returned to the hospital. Wilcox had also been remanded to prison by Squire Faules at a hearing held Friday evening, May 23, however, he was out on bail. A few days after the return of the patient a letter was received from the Superintendent of the Laurelton State Village, which Lillian had written to her sister, who is a patient at Laurelton. In this letter, which Lillian had written when she was away, she tells her sister that she is living with Riddell at 6 West Union St., Wilkes-Barre, as his wife.

Notwithstanding all these facts which left no doubt as to the guilt of these men the Grand Jury refused to return a true bill and they went free. It is very discouraging to the authorities of the Institution to feel that friends and relatives of the patients can take them out through the windows and cannot be punished for doing so.

Section 702 of the Mental Health Act, Laws of Pennsylvania, reads as follows:

"If any person shall aid or assist any patient lawfully admitted to any mental hospital to make, or attempt to make, his escape therefrom, or shall connive in any way at such escape, although no escape has actually been made; such person shall be guilty of a misdemeanor, and, upon conviction in the proper court, be subject to a fine of not more than fifty dollars, or imprisonment for not more than three months, or both, at the discretion of the court."

This, without doubt, provides for cases such as was before the Grand Jury. It makes it very difficult for the trustees and superintendent of the institution to lawfully conduct its affairs when taxpayers of the county who are placed on Grand Juries allow men to go free who have deliberately removed from the institution a patient who has been legally committed to the institution.

THE 1930 SESSION OF THE AMERICAN MEDICAL ASSOCIATION

The eighty-first annual session of the American Medical Association was held at Detroit, Michigan, June 23 to 27, the meeting being called to order by the president, Dr. Malcolm Harris of Chicago, who in his address stated that the high cost of being sick, which today has risen to a point at which the "white collar" worker of small income no longer can afford it, is producing social changes that threaten the time-honored status of the personal, private physicians. Socialization of medical service by the state is already being proposed in England and Belgium. Most startling was President Harris' proposal, for changing the physician's status for his own and the public's betterment, that county medical societies establish public centers for the treatment of patients unable to pay full charges. These centers would take the place of the present free centers established in many cities, and, being under the control of the doctors, would be far preferable to state-owned, or

charity-endowed institutions. "Medicine is being besieged on every side by forces that are becoming stronger and stronger, and unless some defensive effort is made the profession must eventually capitulate and become socialized and become employees of the state," declared President Harris. "The establishment of these pay medical centers will do much toward maintaining professional independence of thought and action, and it is infinitely better to do these things voluntarily than to be forced to yield to coercion."

President-elect William Gerry Morgan, of Washington, D. C., in his address stated that hospitals in changing from their original status of charity institutions to the present position of places for the care of all kinds of sick—well-to-do, poor, and pauper—have brought about a condition unjust to physicians. The popular misconception has arisen that the doctor's services are included in the hospital's services, and that one bill covers both. A Massachusett's court has even ruled this way, he said. On the contrary, the hospital in no sense provides the services of the physician who treats the patient there. The services are not the hospital's to provide. To make the distinction clearer, he offered the following statement of principles for adoption by the House of Delegates.

1. The physician is no more obligated to provide for the care of the indigent sick than his fellow citizen.

2. In mutual charitable undertakings for the care of the sick, each citizen contributes what he has: the laymen, physical necessities; the physician, professional skill. Each, however, has a right to protect himself from exploitation, and to judge of the merit of the recipients of his bounty.

3. When a hospital offers its facilities to a mixed clientele, pay, part pay, and pauper, the distinction between the sources of these facilities should be clearly recognized. The physical equipment and service is of general public origin, and their uses may be sold or given away in the discretion of lay boards, but the professional facilities are, and always must be, the contribution of the medical staff as individuals and cannot become in any sense the property of the institution.

4. When a hospital is owned and operated by government and supported by taxation, to which the medical profession contributes its due proportion, medical attendance should be paid for by taxation, along with all the other facilities supplied by the institution.

5. No hospital, instituted and supported by public philanthropy or community coöperation of any kind should be permitted to increase its revenue, and so reduce its financial burden upon the public, by any system of collecting fees for medical attendance, and thus engaging in the corporate practice of medicine.

6. The membership of the association should be guided by these principles in accepting posts on the staff of hospitals, and should refuse to support by the contribution of their services or by the references of their patients, any institution violating them.

"Mass production methods in the practice of medicine are being publicly advocated by outsiders," declared Secretary Olin West, in his annual report, "while government policies, already adopted or under consideration, will further retard the development of scientific medicine and hamper its application. The conditions of the times demand a more militant spirit in this organization, so that it will become more efficient in its work for advancing the science of medicine, and for opposing anything and everything that would reduce a useful and honorable profession to the status of a trade, or of a socialized group of hirelings without professional ideals."

Opposition on the part of the medical profession toward government control of narcotics as proposed in the Porter bills introduced at the last session of congress was explained in the report of the bureau of legal medicine and legislation. The bills were opposed on the ground that undue power would be invested in the bureau of narcotics that the bill proposes and that the validity of licenses issued by the states would be destroyed so far as these apply to the use of narcotics by physicians. The association has opposed the bills providing for the continuance of the principles of the Sheppard-Towner maternity and infancy act for the same reason. It believes that states are able to pay the cost of this work themselves and deplores the taking over by the federal government of rights and duties invested in the states under the constitution.

The council on medical education and hospitals, which has just rounded out its twenty-fifth year of service, contrasted conditions in medical schools in 1904 with those of the present. At that time there were 162 medical schools in the United States and only 154 in the rest of the world, and few of the American schools compared favorably with those abroad. The aim of the council has been fewer and better schools, with the result that there are now 76 medical schools of class A.

The continuous method of medical instruction, known as the four-quarter system, by which a student may shorten his medical course is now being used by 8 medical schools, the council reports. In this way the medical course may be covered in 3 years of four quarters each instead of in 4 years of three quarters each. Since under the older system the student is 26 or 27 years old when he finishes, any method of reducing the course is welcomed.

The *Free Press* (Detroit), in an editorial, referred as follows to the American medical profession: "The annual illness bill the American people has to foot is appalling; but it would be far more staggering if it were not for the unceasing war on disease that the medical profession has waged for centuries. The present state of medical knowledge has been attained by sacrifices, which if less spectacular than those of the battlefield, were far more noble."

A unique and impressive feature of the opening meeting of the session was the presentation to living past-presidents of the Association of an emblem to be worn on official occasions, commemorating service to the organization. The presentations were made by Dr. Edward B. Heckel, Pittsburgh, chairman of the Board of Trustees. The medal bears on one side a profile of Æsculapius, the Greek god of healing, and a rod and serpent, encircled by the words "American Medical Association Founded 1847." On the reverse side appears the name of the recipient and the year of his presidency, with a symbolic representation of healing herbs.

Never in the history of the A. M. A. conventions, has there been so large or complete a scientific and technical exhibit as this year. The complete registration was 5016.

Dr. Edward Starr Judd, of Rochester, Minn., was elected president-elect, and Philadelphia, Pa., was selected as the convention city for 1931.

The following Pennsylvanians were elected to office

in their respective Sections: Laryngology, Otology, and Rhinology, Dr. Gabriel Tucker, Philadelphia, secretary; Diseases of Children, Dr. Ralph M. Tyson, Philadelphia, vice-chairman; Gastro-enterology and Proctology, Dr. Martin E. Rehfuss, Philadelphia, alternate delegate; and Radiology, Dr. Ralph S. Bromer, Philadelphia, vice-chairman.

Dr. Walter F. Donaldson, Pittsburgh, was chairman of the Pennsylvania delegation. Several alternates were seated, the personnel being as follows: Walter F. Donaldson, Pittsburgh; J. Norman Henry, Philadelphia; D. W. Thomas, Lock Haven; Arthur C. Morgan, Philadelphia; J. Newton Hunsberger, Norristown; William H. Mayer, Pittsburgh; John A. Campbell, Williamsport; Frank P. Lytle, Birdsboro; G. W. Reese, Shamokin; E. R. Whipple, Steelton; Howard C. Frontz, Huntingdon.

The following officers and members of Councils were elected by the House of Delegates: secretary, Olin West, Chicago; treasurer, Austin A. Hayden, Chicago; trustees, Thomas S. Cullen, Baltimore; Joseph A. Pettit, Portland, Ore.; J. H. J. Upham, Columbus, Ohio; member, Judicial Council, George Edward Follansbee, Cleveland; member, Council on Medical Education and Hospitals, Charles E. Humiston, Chicago; member, Council on Scientific Assembly, Frank Smithies, Chicago.

The Medical Veterans of the World War honored Major General Merritte W. Ireland, surgeon-general of the United States Army at a dinner, and presented him with an onyx and gold tablet.

Among the awards in the scientific exhibit were the following:

Class 1. (Awards in Class 1 are made for exhibits of individual investigations which are judged on basis of originality and excellence of presentation.) In addition the following excellent exhibits are deemed worthy of special mention: (All these studies are valuable contributions by investigators whose noteworthy work has been recognized by awards at previous exhibits of the American Medical Association.) Henry H. Pancoast, Eugene P. Pendergrass, and Gabriel Tucker of the University of Pennsylvania, Philadelphia, on roentgenographic studies of diseases of the neck and upper respiratory tract.

Class 2. (Awards in Class 2 are made for exhibits which do not exemplify purely experimental studies, and which are judged on basis of the excellence of correlating facts and excellence of presentation.) In addition the following exhibits are deemed worthy of special mention: George E. Pfahler and Jacob H. Vastine, of Philadelphia, showing radiation treatment of cancer of the mouth.

A fathers-and-sons banquet—180 spiritual sons of the venerated past presidents of the American Medical Association, and 11 of the 17 living past presidents, at which each was asked to tell what event in his life had most influenced him in his career, was held. And most of them answered "My father," with the depth of reverence that comes to older men as they bring up sacred memories of the past. Dr. J. D. Brook, president of the Michigan State Society, presided.

The women in attendance were scheduled to explore the highways and waterways of Detroit, and share the varied forms of entertainment daily provided for them.

Mrs. J. Newton Hunsberger, Norristown, was elected president for 1930-1931 of the Woman's Auxiliary to the American Medical Association, and Mrs. H. C. Podell, Norristown, was elected corresponding secretary. Mrs. W. Wayne Babcock, Philadelphia, is chairman of the Standing Committee on Revisions, and Mrs. W. J. Freeman, Philadelphia, is chairman of the Social Standing Committee. Mrs. Edgar S. Buyers, of Norristown, is chairman of the Standing Committee on Printing. The Auxiliary held numerous business meetings and had a varied program. At a special luncheon, Mrs. Walter J. Freeman, of Philadelphia, was toastmistress.

The Medical Women's National Association held its sixteenth annual meeting at Detroit. Dr. Olga Stastny, whose work with the Smyrna refugees of 1922 has made her name a symbol of greatness in the medical world, was advanced to the president, and Dr. L. Rosa Gantt, of Spartansburg, S. C., was elected president-elect. One of the two most important resolutions adopted stated the belief of the women doctors that contraceptive information is properly a medical function. It was directed that letters, stating this, and pointing out that such information should be given at the doctor's discretion, be mailed to the governors of the three states of the union in which the information is illegal, namely, Pennsylvania, Mississippi, and Massachusetts. The other resolution voted down the request of the Amateur Athletic Association that the doctors oppose the admission of women to the Olympic Games. They went on record as stating their belief in competitive sport for women, properly controlled.

Dr. Martha Tracy, of Philadelphia, who reported the scholarship awards, announced that the society now had 9 students under their loan-system of education. The students enter an agreement to repay the money advanced for the medical education after their profession becomes a paying business.

The American Medical Golfing Association played its annual tournament over the Hawthorne Valley Course. About 120 members participated. Dr. J. P. Louden, of Yakima, Wash., retained the association championship for the second year, and was awarded the Will Walter trophy. The Detroit Trophy, given for the handicap championship to be won thrice for permanent holding, was captured by Dr. R. R. Hanses of Marshalltown, Ia.

The total number of delegates registered and in attendance on the meetings of the House of Delegates was 160. All constituent state and territorial medical associations were represented except Delaware, Idaho, Nevada, New Mexico, Alaska, Hawaii, the Philippine Islands, and Porto Rico, and all sections of the Scientific Assembly were represented except the Section on Obstetrics, Gynecology, and Abdominal Surgery and the Section on Pharmacology and Therapeutics.

The Secretary reported that the enrolled membership of the Association on April 1, 1930, was 99,181, and that during the year 1929 the deaths of 1378 members were recorded.

The number of Fellows on April 1, 1930, as shown by the Secretary's report was 65,419.

The financial statement submitted by the Board of Trustees showed that the gross income of the Association for the year 1929 was larger than in any previous year but that increased expenditures due to enlargements and improvements in the publications of the Association and in the expansion of the work of the various councils, bureaus, and departments more than offset the gain in gross income. The net gain for the year was $257,654.86—$19,000 less than the net gain reported for the year previous. The outlay occasioned by increased activities in practically every department was, exclusive of the department of publications, approximately $26,000 greater than in 1928.

The Board of Trustees commented on the constantly increasing demands that are being made for greater service and pointed out that the natural development

of the Association would inevitably necessitate larger annual expenditures and that the expansion and improvement of service, together with the necessary installation of equipment to replace that worn out by constant use over a period of many years, and the provision of more adequate housing facilities will inevitably demand a larger income than has heretofore been realized.

The Coöperative Medical Advertising Bureau now serves 30 official publications of constituent state medical associations. The *Delaware State Medical Journal* was added to this group in 1929 and only 2 state medical journals are not members of the Coöperative Medical Advertising Bureau.

The earnings of the Bureau for 1929 were $27,584.99, of which $11,500 was rebated in proportionate amounts to the journals holding membership. The remainder of the sum represented by the total earnings of the Bureau was used in paying operating expenses. The sum rebated to coöperating state medical journals was, of course, in addition to the amounts received by those journals in payment for advertising space.

Dr. C. F. Moll, Michigan, submitted resolutions providing that "the precedent governing entertainment functions is hereby terminated" and "that at future annual sessions the only formal entertainment sponsored by this Association shall be the President's Annual Reception, the expense of which shall be borne by this Association," and "that the only obligation that shall rest on the local profession of any city in which this Association holds its annual session shall be to render such assistance through proper committees or individuals as will enable the Trustees and other officers to provide suitable hotel accommodations, meeting places, exhibit space, and local information."

These resolutions were referred to the Board of Trustees and, on recommendation of the Board, were adopted by the House of Delegates.

Dr. J. B. Harris, California, submitted resolutions from the California Medical Association providing that the American Medical Association should establish a Council on Medical Economics. This resolution, together with the recommendation of the President providing that a Bureau of Medical Economics be established, was referred to the Reference Committee on Reports of Officers. This Reference Committee recommended "that the Board of Trustees put the principle into effect by the creation of a Bureau of Medical Economics to function under the direction of the said Board." The recommendation of the Reference Committee was adopted.

On recommendation of the Reference Committee on Medical Education, the resolutions submitted by Dr. Sloan were adopted.

Dr. C. B. Wright, Minnesota, offered a resolution to the effect that the Speaker of the House of Delegates be authorized to appoint a committee of five representing the various sections of the country and composed of men who have had experience in dealing with state legislation, which committee should study legislative problems and offer recommendations to the House of Delegates and, in the interim, to the Board of Trustees.

The Reference Committee on Legislation and Public Relations recommended that the resolution be changed to read as follows:

Resolved, That the Board of Trustees appoint annually a committee of five representing various sections of the country, the personnel of said committee to be composed of men who have had experience on state legislative committees, that said committee is to study these problems and to coöperate with the Bureau of Legal Medicine and make such recommendations as they consider necessary to the House of Delegates, and in the interim to the Board of Trustees."

The resolution as amended by the Reference Committee was adopted.

Dr. J. D. Brook, Michigan, offered a resolution providing that action be taken through a proper committee designed to educate manufacturers of children's toys to the hazard involved in the use of pins, buttons, and other small objects loosely attached to such toys.

On recommendation of the Reference Committee on Hygiene and Public Health, the resolution of Dr. Brook was adopted.

The Reference Committee on Sections and Section Work commended the action of the Council on Scientific Assembly in substituting clinical lectures for diagnostic clinics at annual sessions of the Association, and the report of the Reference Committee was approved by the House.

The Reference Committee on Reports of the Board of Trustees and Secretary reported as follows on the report of the Secretary:

We endorse the sentiment expressed in the report of our secretary in which he recommends a more active and aggressive program on the part of component medical societies, stressing the necessity for unified action on the part of the Medical profession as being essential in maintaining leadership in all questions pertaining to health matters. Also, the importance of establishing and maintaining the hearty coöperation of both the state and the county organizations through the agency of their respective public relation committees.

We recognize the changing method in medical practice; however, we earnestly urge a realization of the necessity of maintaining the personal relationship between physician and patient, and oppose any attempt on the part of any well meaning but misinformed and misguided individuals or organizations in their efforts to apply "mass production" methods to the practice of medicine.

The Reference Committee on Amendments to the Constitution and By-Laws recommended that Chapter XI, Section 2, of the By-Laws be amended as suggested in the report of the Judicial Council to read:

Any member of this Association holding a degree equal in requirement to that of M.D. granted by a school of medicine recognized by the American Medical Association entitling the holder to apply to a state board of medical examiners and registration for license to practice medicine, and who on the prescribed form shall apply for Fellowship and subscribe for *The Journal*, paying the annual Fellowship dues for the current year, shall be inducted into the Association as a Fellow unless the application is disapproved by the Judicial Council.

This amendment was adopted by the House of Delegates and is intended to serve the purpose indicated in the report of the Judicial Council, namely, to exclude from Fellowship all persons except those holding the degree of Doctor of Medicine or its equivalent.

On recommendation of the Reference Committee on Amendments to the Constitution and By-Laws, Chapter XI, Section 12, of the By-Laws was amended to apply only to members of the Association. The effect of this amendment is that the House of Delegates shall have power to discipline or expel a member of the Association on recommendation of the Judicial Council.

The following resolutions offered by the Board of Trustees were adopted by the House of Delegates and a copy sent immediately to the President of the United States:

Resolved, That, in the opinion of the House of Delegates of the American Medical Association, legislation to extend in point of time the presumption of service

origin of diseases and injuries from which veterans are suffering, to establish arbitrarily the service origin of such diseases and injuries, and to extend greatly the category of such diseases, is without sound basis in the science and act of medicine;

Resolved, That the provisions of such legislation to the effect that lay evidence as to the nature and extent of diseases and injuries is to be given added consideration will give to such evidence weight to which it is in no way entitled and cause pressure on the Veterans' Bureau to allow claims for compensation without adequate medical support;

Resolved, That legislation recently enacted providing for the enlargement of the hospital facilities at the command of the Veterans' Bureau for the care of veterans, rich and poor, who desire hospitalization and treatment for diseases and injuries that admittedly have no relation whatever to military service is unsound and communistic in character, and the pending proposal to allow such veterans as are of financially limited means bonuses and money to add to their own comforts while they are in the hospital and to help support their families during that period and for limited periods thereafter is calculated to induce patients to seek hospital care through the Veterans' Bureau when such patients should be better and more economically treated as ambulant patients or treated in their own homes;

Resolved, That the duty of providing medical and hospital care and financial relief for indigent citizens of any state, when disabled by diseases and injuries that did not originate in the line of military duty, is a function not of the federal government, but of the governments of the several states and should be discharged through state agencies, including permanently established state, county, municipal and private hospitals; and

Resolved, Further, that a copy of these resolutions be sent to the President of the United States.

The following resolution, offered by Dr. George W. Reese, Pennsylvania, was adopted on recommendation of the Reference Committee on Hygiene and Public Health:

Whereas, Investigations made of numerous clinical thermometers offered for sale in the open market indicate that these devices are not always correctly standardized even though they carry a certificate indicating that they have been checked with a standard instrument secured from the Bureau of Standards in Washington, D. C., and

Whereas, Correct reading of the temperature of the patient is of the utmost importance as a clinical sign and that a decision of the greatest seriousness concerning the health and even the life of the patient may depend on accurate recording of the temperature of the patient; therefore, be it

Resolved, That this House of Delegates through the Board of Trustees request the Bureau of Standards to formulate a method whereby thermometers alleged to conform with a standard set by the Bureau of Standards be checked as to such conformation, and that suitable penalties be provided by law for violation of such standards by manufacturers.

The following resolution, offered by Dr. Charles E. Humiston, Illinois, was adopted by the House of Delegates on recommendation of the Reference Committee on Legislation and Public Relations:

Whereas, Licenses issued by the Federal Radio Commission to broadcast have frequently been used as authority for disseminating false, misleading, pernicious and even obscene statements concerning matters of health, not for the benefit of the public but solely for the promotion of the selfish interests of the proprietor of the broadcasting station:

Resolved, That the House of Delegates of the American Medical Association, recognizing the legal prohibition on the censorship of radio programs, urges on the Federal Radio Commission the necessity for extreme care in the character and qualifications of persons and corporations desiring to broadcast medical programs and a liberal construction in favor of the public of the law authorizing the revocation of licenses that are against public interest.

JOTS AND TITTLES

Science and Research

According to Dr. Cornelius C. Wholey, of Pittsburgh, actual organic disease may result from mental disturbance. Dr. Wholey described a 14-year old girl who had attacks of gall-bladder disease in imitation of and in sympathy with a real case of gall-bladder disease in her mother. Dr. Wholey claims that the mental and emotional disturbances upset the normal functions of the sympathetic nervous system which regulates the body's secretion, circulation, digestion, and respiration. If the upset persists too long, it is likely to become organic.

According to an article in the *Science News-Letter,* Dr. Ralph Pemberton, of Philadelphia, claims that heredity is one of the many factors which are now seen to cause rheumatism. He states that certain types of persons are most frequently attacked by this complex. It is now considered that focal infection is only one of many factors that produce rheumatism. Disturbances of the circulation or of the nervous system and derangements of the digestive system have also been found to produce rheumatism. There are clinics in nearly every medical center today while ten years ago there were only two or three in the United States. This development is partly the result of general progress in medicine and partly the result of pressure from the industrial world to reduce disability pensions, as rheumatism is one of the most frequent cases of disability in middle life.

Apparatus designed by Phil Drinker and L. A. Shaw of the Harvard School of Public Health and demonstrated recently before the American Medical Association is intended for those patients in whom artificial respiration must be kept up for days at a time. The patient is rolled on a comfortable bed into a large metal tank, with his head protruding from the tank and resting on a pillow. A soft rubber collar fits around his neck. An electrically driven pump and valves create a slight negative pressure within the tank, causing air to rush in the patient's mouth and nose. The valves are turned over and air from the room enters the tank. This change in pressure takes place at the normal rate of breathing until the patient breathes for himself. This device enables the patient to sleep, eat, and drink without any interruption to respiration.

Drs. Henry F. Hemholz and Haddow M. Keith of Rochester, Minn., report many encouraging cures of epilepsy from the use of a diet high in fat content, known as the ketogenic diet. This diet was worked out by Dr. Russel M. Wilder, formerly of the Mayo Clinic, and now of the University of Chicago. The diet is so named because it produces ketones in excessive amounts in the blood of persons following it. During the past 8 years that this special diet has been investigated, it has been tried on 141 patients who kept it faithfully. Forty-three of these have been cured. Thirty-two more patients have been definitely improved, while 66 definitely did not improve. Some of those who were improved were able to return to a normal diet while others suffered recurrences of the disease when they abandoned the ketogenic diet.

According to an article in *Science News-Letter*, Dr. Meyer Wiener, eye specialist of St. Louis, has successfully treated 100 patients of progressive short-sightedness by the use of the secretion, adrenalin, from the suprarenal glands. Dr. Wiener claims that myopia is not a disease in itself, but is a sign of congenital weakness. This weakness affects the elastic part of the coating of the eye, so that the eyeball stretches and the lens of the eye gets out of focus. Dr. Wiener treats the patient with adrenalin and advises strenuous exercise in an effort to increase the secretion of this substance by the patient's own suprarenal glands.

The Committee on the Costs of Medical Care, 910 Seventeenth St., N. W., Washington, D. C., organized to study the economic aspects of the prevention and care of sickness, including the adequacy, availability, and compensation of the persons and agencies concerned, for the first of a series of surveys, selected Shelby County, Indiana, because it seemed typical of a midwestern rural county. Other surveys will deal with the medical facilities of a large city, a medium sized city, and several rural communities. The full report, some 180 pages in length, will be sent upon request to especially interested persons. This survey showed that the people of Shelby County spent over half a million dollars for the care and prevention of illness—about $21 per capita. Of this total, approximately one-third was received by physicians; one-third was spent for drugs and medicines; and the remaining third was paid to dentists, nurses, hospitals, and other agencies.

In a paper read before the American Medical Association, Dr. George S. Derby, of Boston, described a number of cases of ocular neurosis from which the patient recovered after his bodily condition had been treated and he understood the psychologic cause of his eyestrain. The eye is provided with a large factor of safety and healthy eyes do not become diseased even by excessive use. Usually ocular neurosis is found in sensitive, nervous patients. Fear of losing eyesight is the most common factor in these cases. Dr. Derby appealed to ophthalmologists not to overlook the psychologic factor in eyestrain and to treat the mental condition of their patients as well as to correct their vision with eyeglasses.

In an effort to determine the cause of the death of two children, who had died with many of the symptoms of acute poisoning after they had poured water into an old maple sugar can to dissolve the chalk-like sand on the bottom of the can and had then drunk it, a quantity of this sugar sand was sent to the New York State Division of Laboratories and Research. The substance was found to be a complex mixture, the largest percentage, however, being calcium malate. This sugar sand becomes insoluble and separates out from maple syrup when it is concentrated to such a degree that the boiling temperature becomes 120°C. or more. Calcium malate is quite similar to magnesium malate. In tests using magnesium malate, doses of 6, 9, and 12 grams were found to produce increasingly severe symptoms when given to men and dogs. The 12 gram dose produced severe diarrhea, abdominal cramps, and a large amount of flatus. It is quite possible that the deaths of the two children could have resulted from the ingestion of sugar sand if the children had access to a sufficiently large amount.

Dr. Arthur M. Shipley, of the University of Maryland School of Medicine, has recently described to the American Medical Association a new anesthetic, *avertin*, developed in Germany, which is just beginning to be used in this country. This anesthetic, tribromethanol, is rapidly replacing ether for many operations. It is injected about 30 minutes before the operation and the patient falls into a deep sleep, without a feeling of dread or apprehenson. No nausea or restlessness accompanies the awakening which usually takes place hours after the drug has been given. This long and apparently natural sleep gives the body a good start toward healing. It reduces the amount of blood pressure somewhat so it is particularly good for patients who have high blood pressure. A patient who has diseased kidneys, liver, rectum, or pulmonary tuberculosis, or colitiis, or if the patient is old or feeble, avertin cannot be used. It has been found very successful in operations on the brain and eye.

A Growing Menace

Two unenviable records were set by automobile fatalities in the United States last year, according to figures announced in July by the American Motorists Association. The number of deaths, 33,060, was the highest in 13 years covered by the report and marks a new high record for the past 10 years when computed the ratio of deaths to the number of automobiles in use. It has frequently been assumed that this ratio was decreasing. That was the case until 1927, according to the report. The total killed by automobiles during the 13 years was 218,373.

The increase in this ratio is the gloomiest aspect of this picture, emphasizing the necessity for expanding and strengthening methods of accident prevention. A timely step in this direction has been announced in New England, where a "Save-a-Life Campaign" will be conducted throughout the month of August. It will be made official for each State by proclamation issued by the governor, and railroads, rapid transit companies, insurance companies, motor clubs, civic organizations, and safety councils have all pledged coöperation. Such coördinated campaigns are an improvement over localized efforts. The greatest need, however, is for more uniform and stricter regulations governing the licensing of cars and drivers in order to bar unsafe vehicles and reckless drivers from the highways.

Free Advice From Doctors

It is of interest to note from time to time the various schemes resorted to by commercial houses in order to obtain free opinion from the medical profession. The Philadelphia physicians recently received a questionnaire from a tours company, "requestng answers from the leading physicians of Philadelphia, with the object of learning the attitude of the medical profession in regard to the physical benefits to be derived from ocean travel."

There were six questions. The audacity is more apparent in the closing paragraph. "If you care to recommend this world famous travel company to your patients, rest assured that a courteous and highly skilled staff are at their disposal."

At the bottom of the page is a place for the name and address of the doctor. There was no stamped, addressed envelope inclosed to return the reply.

We are willing to wager, that replies will be returned. It is most unfortunate that all physicians cannot be brought to the realization of the affront, in matters of this kind.

Relation of the Referring Doctor to Ward Patients

Frequently people are referred to the staff service in the wards of hospitals for observation and suggested or actual treatment. These people represent patients

who either cannot afford to be treated by a private physician outside the hospital, or who have not the accommodations for an illness. Such patients are duly admitted to the free wards of the hospitals and then begins the struggle to make an adequate diagnosis and give sufficient treatment as indicated by the results of the case study, and at the same time to get the patient out of the hospital in as few "hospital days" as possible. Many times frequent investigative studies are made with very little result in the final diagnosis. How much time would be saved and how much more efficient the results would be if the previous attending physician was called in to go over the patient and the history with the staff doctors! True, an attempt is made to refer the patient back to the doctor with a synopsis of findings and suggestions. Very often even this is neglected. In many instances the doctor who referred the patient to the hospital finds the staff doctors had an entirely different conception from his own. This at times is beneficial to the patient and at other times the reverse. Probably much time and confusion would be saved and much more accurate conception of the true character of the case obtained were the socalled family physician called in to consult with the staff doctors.—*The Medical Reporter.*

PHYSICAL THERAPY

Treatment With Roentgen Ray

Dr. Arthur C. Desjardins of Rochester, Minn., told the members of the American Medical Association that x-rays have been found helpful in the treatment of boils, carbuncles, certain cases of pneumonia, erysipelas, inflammation of the kidneys, and many other inflammatory conditions. Irradiation tends to destroy the leukocytes. These contain a substance that enables them to destroy the invading germs. In destroying the leukocytes, the irradiation liberates the protective substance from the cell, making it even more readily available than when it is in the intact cell.

Heat Treatment for Insanity

The director of the Elgin (Illinois) State Hospital is using an electrical fever machine, similar in principle to a short-wave radio transmitter, on the average of four patients a day. This treatment, with one exception, has been given to patients suffering from paresis. The treatment consists of bringing the patient's body to a fever heat, which will kill germs that are unable to live in a temperature higher than innormal to the body. Each patient is given a 4-hour treatment once a week for 14 weeks. More than 40 patients suffering from paresis have been treated, and some of them have been discharged as cured and practically without exception all have shown improvement. With the small number treated, however, it cannot be claimed definitely that the problem is solved. The great virtue of the treatment is that it is controllable and cannot harm the patient. When the heat is turned off, the patient begins cooling off and within an hour or so his temperature is back to normal.

The Sale of Sunshine Lamps to the Public

The Council on Physical Therapy has taken the stand that a sunshine lamp sold directly to the public should be so constructed that the radiant energy emitted shall not differ essentially from sunlight. Furthermore, the advertising and descriptive matter pertaining to such lamp should contain no curative claims nor mention of specific diseases.

In general, the Council believes that more conservative claims for the necessity of strong sunlight should be made by the manufacturers of lamps for home use, such statements being restricted to those which can be justified by conclusive scientific evidence. The Council is not convinced that human beings in health require the great amount of ultraviolet energy one is led to believe is the case from the advertising and descriptive matter pertaining to some of the so-called sunlamps sold to the public.

A number of the more responsible manufacturers have fully agreed with the opinion of the Council. The emission characteristics of their lamps are in essential agreement with the requirements established by the Council, and in their advertisments they carefully avoid making curative claims. Furthermore, in these advertisements attention is called to the advisability of consulting one's physician before exposing oneself to ultraviolet radiation.

From time to time the Council will publish reports on the sunlamps which conform to the requirements established by the Council. These reports will describe in detail the construction and operation of the lamps and will contain complete information on their electrical and emission characteristics.

Physical Therapy in Chronic Arthropathy

Emerson endorses physical therapy plus motion in the treatment of the chronic arthropathies. He professes to be skeptical about physical therapy which does not lend itself to motion. Physical therapy itself has a function in changing metabolism around the joint, perhaps changing calcium distribution, and changing the circulation, but after all unless physical therapy is followed by greatly increased exercise of the joint, the best effects are lost. Opportunity is given for more and more exercise of the affected joints. The patients should be kept in motion. If they are allowed to stagnate in bed they become an excellent culture medium for germs to grow on and kill. Any physical therapy or psychotherapy that will keep them in motion will be of benefit. As to diet, Emerson, prefers a good rich diet. He is not convinced that there is any more than a theoretical possibility that diet is important in the joint groups. There is, he says, a definite proof that the diet affects the flora of the bowels and also that the flora of the bowels affects certain other mechanisms which may affect the joint. He does not believe diet has any benefit on the arthritis directly, but it does direct this chain of concussion. Therefore the proper care and diet for the bowel is of great importance.—*J. A. M. A.*

HOSPITAL ACTIVITIES

The Patient's Record—*Continued*

The *operative record* is a very important record, and should be carefully made, and dictated as soon after the operation as convenient, and at least on the day of operation, if possible, in order not to be tricked by memory at a later date.

There are times when the operator's appointments are such that he cannot dictate the record upon leaving the operating room, but must postpone it until his next visit to the hospital. Not infrequently neither he nor the intern gives the operating record another thought. Upon discharge of the patient the incomplete record is turned in to the chart room, and the chief is embarrassed later when asked to approve the chart to find the operative record a blank. If unable to make a

complete record at the time of operation, at least complete the postoperative diagnosis and the names of the operations done, not only to afford a record for the operating room clerk to transcribe, but to be of further help to the operator when he subsequently completes the record.

The operative record should afford certain definite data.

1. *Preoperative diagnosis* should always be determined *before* operation, *not afterward.* We know of surgeons who will not record the preoperative diagnosis until after the operation is done, to show their superior ability as diagnosticians. This reprehensible practice is not only unfair to the operator himself, but to the other staff members, and the institution. In making a comparative study of preoperative with postoperative diagnoses, as a comparative study of the surgeon's skill in diagnosis, it is necessary that he play fair in making proper notations as to preoperative diagnosis.

2. *Postoperative diagnosis* should be recorded in full, and not simply include what may be considered the more important features. In gynecologic work especially, very frequently the preoperative and post operative diagnoses necessitate the use of several terms, as it is so seldom that only one operative procedure is done.

3. Under the heading, *operation,* should be recorded the names of the various operations done.

4. Under the title, *what was done,* should be given a description of each operation done; any other procedures that were necessary; any accidents that occurred and what was done; and the name or kind of incisions made, and method of closure.

5. *Gross findings* should record the disease and conditions found in approaching the operative field, and the field itself; also any thing determined by exploration in other directions. It is a very valuable part of the record when efficiently done.

6. *Immediate postoperative condition* not only affords information as to the general condition of the patient at the end of the operation, but the record also should record any undue loss of blood, for subsequent information, especially in its relationship to shock.

The *operative blank* also should show the name of the surgeon; the names of assistants; the name of the anesthetist; the names of the sponge nurses; the preoperative condition of the patient as to temperature, respiration, pulse and blood pressure, and general condition; the kind of anesthetic used; the condition during anesthesia, as to respiration, pulse, and general condition, and the stimulants given are noted; the time operation began and was finished; and, the microscopic findings.

The signature of the operator completes the record.

How to Keep Accurate Case Histories.—Dr. John O. Polak discusses this all important subject as follows: The hospital case history should be a complete record of the patient's illness and should include: (1) the subjective story as told by the patient; (2) the objective signs obtained by a complete physical examination; (3) laboratory records; (4) a detailed description of any operative procedure; (5) the pathologic findings; (6) daily follow-up notes as to progress; (7) the record of the condition on discharge; (8) x-ray plates, photographs, and the autopsy report. The omission of any of these essentials always leads to trouble. Proper attention must be given to the chief complaint and the sequence of symptoms, for all diseases present a clinical picture that suggests the working diagnosis. This story may be misinterpreted, but if correctly recorded it will nearly always lead to the presumptive or working diagnosis. A presumptive diagnosis is made on the suggestive symptoms and characteristic signs. Laboratory aids are only confirmatory and should not be depended upon for any other purpose.

To be complete the history must include all the patient's story. Deletion is not necessary and the orderly sequence of events is imperative. To estimate this, 200 medical and surgical cases in which a good clinical history (story) was recorded were taken and a presumptive diagnosis set down. No physical or laboratory tests were made and the result was checked by operation or autopsy. A correct diagnosis was made in 85 per cent of the cases. As a contrast to these cases, 200 case examinations were made and no histories were recorded. Complete physical examinations were made, every known laboratory test was used, the findings were interpreted by the same group of clinicians, and but 61 per cent of the diagnoses were correct.

Photographs of deformities and of the progressive changes made in this connection should be a part of the history in all traumatic cases or in orthopedic cases in which correction is tried. Likewise, all laboratory data, signed, should be a part of the history. Progress notes by the attending physician are of vital importance. For instance, it is not uncommon to find a fistula of the abdominal wound continuing for weeks because a drain or a silkworm gut suture has not been removed or part of it has been cut off. Careful inspection by the attending physician and note of such inspection may save him and the hospital many thousands of dollars in damages. Attending physicians are often lax in insisting that all these details be included in the record. They are necessary, however, for the good of the patient and for the protection of the physician and the hospital. This complete record gives the referring physician the necessary information, establishes friendly relations between the outside physician and the hospital.

How long should histories be kept? This depends on the type of illness, the accident, the operation, and other things. In medical records and compensation records, the latter have a future bearing on the patient's after life, not only in a medical sense but because of their legal bearing. Ten years seems to be a safe period for preservation, though when histories are properly bound and filed they may be easily stored and kept to advantage indefinitely. All records should be reviewed by some one specially designated for this service, usually a junior staff member. Omissions should be noted and inserted at weekly staff conferences. No history that is incomplete should be filed, and each history when completed should be checked by the attending physician. This fixes the responsibility and keeps everybody on the service on the alert.

The history is the property of the hospital. Each history should be filed, indexed, cross indexed, and preserved. No history should under any circumstances be removed from the record room unless a subpœna to that effect is issued by the court order. Nurses and interns must be instructed not to give information contained in the history to family or friends. An abstract may be sent to the referring physician, since it helps to make the records more complete.—*Modern Hospital.*

MEDICOLEGAL NOTES

Section of Motor Code Ruled Unconstitutional.—The Pennsylvania State law requiring that arrested motorists be arrainged before the nearest available magistrate was declared unconstitutional, July 7, by

Judge Hargest in Harrisburg. His ruling is based on the fact that no mention of the restriction is made in the title of its section of the 1929 Motor Vehicle Code. A member of the legal staff of the State Motor Vehicle Bureau said such a decision had been expected for some time. The question of constitutionality was raised by Carl E. Richards, an assistant district attorney, when F. J. Marter, of Steelton, appealed his case, contending his hearing was illegal because he was taken to Harrisburg City Hall, although several magistrates had offices nearer the scene of his arrest.

Actual Disability Required to Secure Hospital Costs.—The Pennsylvania State Workmen's Compensation Act which provides that "during the first 30 days after disability begins, the employer shall furnish reasonable surgical, medical, and hospital services, medicines, and supplies as and when needed," has been interpreted by the State Workmen's Compensation Board as not applying in the case of an inury that does not cause disability within the meaning of the act. This was the opinion of the board in the case of a claimant who had sustained a crushed finger, but lost no time at work other than for medical treatment.

Doctors Employed by State Institutions in New Jersey.—The New Jersey State Board of Control has announced recently that after a state-wide investigation, following complaints as to outside activities of some resident doctors, it had been decided that doctors were classed as full time employees of the institution. The only outside professional activities to be allowed the doctors, will be consultation work in cases in which the doctors are specialists and in court cases calling for expert witnesses.

Charities.—In Massachusetts it has recently been decided that a corporation operating a store was not exempted on the theory that it was a charitable corporation, from liabilities for injuries to a customer who fell through a trapdoor. The activities of the corporation at the store were commercial in character and were carried on primarily to obtain money to be used for the general charitable purposes of the corporation and not to accomplish directly any specific charitable purpose to which the receipt of money was merely incidental.

Reliance on the Diagnosis of Another Physician.—It cannot be declared, as a matter of law, that a physician may rely upon the diagnosis of another, no matter how skilled, in administering drugs, in the treatment of diseases, that contain a deadly poison. The patient is entitled to have the benefit, judgment, and skill of the physician he has selected, formed from his own diagnosis.—*M. J. & Record.*

Construction of Statute Requiring Injection of Solution Containing Silver Nitrate in Newborn Baby's Eyes.—The North Carolina Supreme Court holds, Covington v. Wyatt, 196 N. C. 367, 145 S. E. 673, that under C. S. §§ 7180-7186, requiring the injection into the eyes of a newborn babe of a solution prescribed by the board of health (which prescribed solution contained one per cent of silver nitrate), if the physician neglects or otherwise fails to instill or to have instilled the proper solution into the eyes of the child immediately after birth, and blindness or diseased condition of the eyes by reason of such neglect or failure results from the cause which the distillation was intended to prevent, he may be liable in damages. But it is also held that the prescribed duty is not absolute in its terms, and liability in damages will not necessarily be inferred from failure to instill the solution where an effort is made in good faith to comply with the statutes. And this duty not being absolute, the physician's liability for damages, for injury resulting from the use of a solution containing a larger percentage of silver nitrate than that prescribed would not be based on violation of the statute regardless of the usual standard of the prudent man, but upon the general principles pertaining to malpractice.

Whether the physician's conduct measured up to this standard of duty becomes material only in case the responsibility of providing the prescribed solution devolved upon him. In this case the mother, at the physician's suggestion, went to a hospital of her own selection. The physician's bill and the hospital's bill were entirely distinct. She was attended by a graduate nurse of the hospital, who, by permission of the physician, undertook to put the solution into the baby's eyes. She took it from a medicine chest belonging to the hospital. The bottle was labelled "Silver Nitrate." The percentage was illegible. The plaintiff's evidence showed that the solution is frequently, and in fact is usually, instilled by the nurse. It was held that, as the hospital undertook to furnish a nurse for the mother, and medicines, appliances and instruments, there was no evidence disclosing such culpabilty or malpractice on the part of the defendant physician as should subject him to liability in damages. Judgment for defendant was therefore affirmed.—*M. J. & Record.*

INDUSTRIAL MEDICINE

Fatal Accidents to Workers Analyzed.—According to an article in *United States Daily,* survey of the accidents to workers in Illinois shows that fatal accidents due to occupational hazards are more frequent among linemen and cable splicers of power and electric light plants than among any other class of workmen, and are least common among house painters. This analysis, made by Public Health officials of Illinois, included 1,300,000 records of 12 insurance companies. The study included 70 classes of industrial employees, and covered a period of 10 years, beginning with 1915.

Sweat Shop Persists in Many Industries.—In a report made by the Women's Bureau to the Department of Labor, it is claimed that the sweat shop still honeycombs industry. This statement was made by the Women's Bureau after a study of 21,573 homeworkers. The study reveals that the clothing trades employ more extensively for homework than other trades because of the simple requirements and lack of technical skill. In some case, uncleanliness and contagious diseases were in evidence to contaminate some of the products. The persistency of this method of labor is because few of the states have any knowledge of the situation. Industrial homework industries, subject to fluctuation with changes in fashion or process, are those of seasonal and very irregular employment.

Safety Measures for Granite Workers.—Granite manufacturers and insurance interests in Quincy, Mass., have agreed to adopt further safeguards for the health of granite workers. Because the insurance companies had found this business unprofitable, they had notified the manufacturers that the granite risks would be cancelled. The rates of $10.00 per $100.00 pay roll will be maintained, since safety measures have been invoked.

PUBLIC HEALTH

Health Survey.—The American Medical Association and the National Education Association recently published a revision brought almost up to date of the health survey of the United States they had made six years ago. Observations:

Exclusive of ordinary illness the U. S. has about 75,000 blind, 45,000 deaf and dumb, 300,000 mental defectives, 700,000 persons crippled so that they cannot earn their living. Maintaining those handicapped individuals costs $100,000,000 yearly. Deaths from tuberculoss cause a national loss of $1,500,000,000 yearly. Taxpayers yearly pay $800,000,000 to support tubercular victims, $90,000,000 for heart cases, $37,000,000 for the physically handicapped—a total of $927,000,000.

During the past 30 years the country's general death rate has been cut in half—from 2 per cent to 3 per cent before 1900 to less than 1.2 per cent. In 1900 more than 16 of 100 babies died before they were one year old. Now only 7 of 100 die. By teaching the public to use typhoid-paratyphoid vaccines and diphtheria antitoxins and toxin-antitoxins, mortality in these diseases has been cut 95 per cent.—*Time.*

Infant Hygiene Work.—On June 11, Mrs. Glenn L. Swigget, of the American University Association of Women, spokesman of the delegation representing 13 national women's organizations, asked President Hoover to endorse the bill to assist infant hygiene work. Following this conference, Mrs. Robert K. Nobel, representing the Service Star Legion, stated that President Hoover gave permission to say on his behalf that he favored the Cooper bill which provides for continuing the infancy and maternity work begun under the Sheppard-Towner Act which has now expired.

Best Babies.—Illinois will hold a better babies conference during the state fair in August. Thus far, registration of babies to be examined shows that boys greatly outnumber girls. From the outset, girls ordinarily outnumber boys among the entries. The medical, dental, psychiatric, and nursing staff scheduled to make the selection of the best babies will be better equipped professionally than any staff previously organized for the conference, so that each child is insured an examination which would be difficult to duplicate. Arrangements have been made to examine 1000 children and nothing will be left undone to provide the greatest possible comfort for the mothers and babies. The new conference rules require that one-half point be deducted from the final score of each child who has not been successfully vacinnated against smallpox, and one-half point from the score of each susceptible child who has not been immunized against diphtheria.

The Illinois Department of Public Health says that September babies have the greatest chance of surviving than do babies born in any other month. Ten per cent of children born in January perish during infancy, while only 7 per cent of the September babies succumb. Nearly a half of all infant deaths occur among the less than one-week old group. This is the group which depends for a start upon life-giving and life-sustaining material acquired before birth. The particular vitamin which provides functioning vigor in an infant is designated as vitamin E. It is found chiefly in the germ of the wheat grain, green vegetables, vegetable oils, and egg yolks. It is believed that the reason September babies have the best chance of survival is because during the spring and summer months the prospective mother eats more foods rich in this vitamin.

Decline in Birth Rate.—Dr. T. F. Murphy, chief of the Bureau of Vital Statistics, claims that the continued decline in the birth rate in the United States is traceable directly to the change in living conditions and other economic conditions. Many large apartment houses do not allow families with children to lease apartments. Seldom are apartment houses equipped with yards or playgrounds or with any inducement for child rearing. A potent factor in this decline, Dr. Murphy believes, is that since the standard of living of the wage earner of today has been raised to such an extent that a family cannot live on the salary earned by the husband, it has brought about the necessity for the wife to go out to work. The effect this continued decline in birth rate will have is uncertain, but it is certain to have a bearing on the economic future of this country.

Morbidity in Pennsylvania in June, 1930

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Aliquippa	7	61	6	0	4
Allentown	5	6	6	0	29
Altoona	1	3	8	1	11
Ambridge	0	0	0	0	0
Beaver Falls	1	1	1	0	1
Berwick	0	0	0	0	0
Bethlehem	2	4	1	1	3
Braddock	2	1	3	0	1
Bradford	0	3	0	0	6
Bristol	0	0	0	0	3
Butler	1	1	0	0	12
Canonsburg	0	0	2	0	0
Carbondale	0	0	0	0	0
Carlisle	0	2	0	0	0
Carnegie	1	34	1	0	0
Chambersburg	0	0	0	2	0
Charleroi	0	1	0	0	1
Chester	1	18	3	0	3
Coatesville	3	0	1	0	0
Columbia	0	2	1	1	0
Connellsville	1	0	0	0	0
Dickson City	1	1	0	0	0
Donora	0	1	0	0	0
Dubois	0	1	0	0	0
Dunmore	0	0	0	0	0
Duquesne	1	1	3	0	0
Easton	1	4	5	0	0
Erie	0	23	4	0	42
Farrell	0	0	0	0	0
Greensburg	0	3	3	0	0
Harrisburg	0	2	3	0	6
Hazleton	18	24	2	0	2
Homestead	0	9	1	0	2
Jeannette	0	0	0	0	0
Johnstown	3	1	7	0	6
Lancaster	6	2	1	1	8
Lebanon	0	0	1	0	0
McKeesport	1	4	6	0	1
McKees Rocks	0	4	0	0	0
Mahanoy City	2	1	0	0	0
Meadville	1	8	1	0	0
Monessen	5	16	1	0	0
Mount Carmel	0	1	0	0	0
Nanticoke	0	4	1	1	0
New Castle	3	18	2	0	1
New Kensington	0	0	0	0	0
Norristown	0	85	1	0	11

Morbidity in Pennsylvania in June, 1930

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
North Braddock ..	1	1	0	0	6
Oil City	0	2	0	0	11
Old Forge	0	0	0	0	0
Olyphant	0	0	1	0	0
Philadelphia	54	1087	329	3	80
Phoenixville	1	21	3	0	0
Pittsburgh	42	452	74	3	111
Pittston	0	0	0	0	0
Plymouth	0	0	0	0	0
Pottstown	3	3	1	0	2
Pottsville	6	0	0	0	1
Punxsutawney	0	0	10	0	0
Reading	3	5	12	0	28
Scranton	2	0	5	0	9
Shamokin	2	0	0	0	0
Sharon	0	2	0	1	0
Shenandoah	1	0	0	0	0
Steelton	0	0	0	0	0
Sunbury	0	2	0	0	0
Swissvale	2	6	0	0	8
Tamaqua	1	1	1	0	0
Uniontown	1	14	2	2	0
Warren	0	59	0	0	9
Washington	0	9	3	1	9
West Chester	0	0	0	0	0
Wilkes-Barre	8	67	34	0	3
Wilkinsburg	3	31	1	0	1
Williamsport	1	90	4	0	2
York	2	3	5	0	1
Total Urban ..	200	2205	560	17	434
Total Rural ..	140	1424	304	44	445
Total State ..	340	3629	864	61	879

TRISTATE MEDICAL CONFERENCE

The fifteenth regular session of the Tristate Medical Conference was held at the Penn Athletic Club, Philadelphia, Pa., May 24, 1930, with Dr. William T. Sharpless, president of the Medical Society of the State of Pennsylvania, presiding. Those in attendance were:

New York.—William H. Ross, Brentwood, L. I.; Joseph S. Lawrence, Albany; John J. Jennings, Brooklyn; Harold Rypins, Albany.

New Jersey.—Andrew F. McBride, Paterson; George N. J. Sommer, Trenton; J. B. Morrison, Newark; Charles B. Kelley, Jersey City; E. C. Taneyhill, Philadelphia, Pa.; Henry O. Reik, Atlantic City.

Pennsylvania.—William T. Sharpless, West Chester; Ross V. Patterson, dean of Jefferson Medical College, Philadelphia; Frank C. Hammond, Philadelphia; Harry W. Albertson, Scranton; Arthur C. Morgan, Philadelphia; William Pepper, dean of the University of Pennsylvania School of Medicine, Philadelphia; Edgar S. Buyers, Norristown; H. W. Mitchell, Warren; William Pearson, dean of the Hahnemann Medical College, Philadelphia; Paul Raymond Correll, Easton.

Dr. William T. Sharpless, (West Chester, Pa.): At our last meeting, in New York, it was decided to have the next meeting confer on the subject of periodic health examinations, but when I found that the interest in medical matters over here centered largely on the question of licensure it was thought this would be a more interesting subject and so it was changed, with the consent of the members from New York and New Jersey. The paper today is by Dr. Patterson, dean of Jefferson Medical College, and president-elect of the Medical Society of the State of Pennsylvania.

Medical Practice Acts, State Boards, and Licensure in the Healing Arts

Ross V. Patterson, M.D.
PHILADELPHIA, PA.

By way of an attempt to justify, at least in part, the views which I am about to present, I may say that I have been actively engaged in medical education as an executive and as a teacher for the past 24 years. During that time I have dealt with a student body almost constantly larger than that of any other medical school in this country; these students were prepared for medical study in a larger number of institutions, and examined before a larger number of state boards than the students of any other medical school. An alumni of 6000 men constantly shifting from place to place and presenting various individual problems, has been an additional factor in my experience with medical licensure.

I have also been concerned at different times with the activities of groups of cultists who have sought licensure, have served on various committees and in other bodies and have taken part in many conferences in which modification of the medical practice act was the subject under consideration. Three years ago I was appointed to membership in the Pennsylvania Commission on the Healing Art, which commission conducted public hearings and made a study of various state laws having to do with the licensure of those admitted to the practice of any form of the healing art. For nearly 25 years I have been in attendance upon the meetings of the Association of American Medical Colleges, the Council on Medical Education of the American Medical Association, and various sessions of the Federation of State Examining Boards. I have had some experience with legislative bodies and political bodies.

I am familiar with the advances made in medical education in the past quarter of a century. I have been one of those who has had a part in the reform in medical education which has taken place during this time and have witnessed the evolution from the chaotic conditions of a quarter of a century ago to the present medical standards which uniformly exceed those of any other country in the world. My point of view grows out of my practical experience. I have had many contacts with every state board in this country, and with many thousands of graduates applying to those boards for licensure. I am not asking you to consider what I have to say as the last word, but I hope that my experience justifies me in asking you to give consideration to the views which I present.

It has been said, and I think truthfully, that medical education is usually 25 years ahead of medical practice; and that medical practice is 25 years ahead of medical licensure. I take it that all of you are familiar with the advances that have been made in medical education in the past quarter of a century. Today there is hardly an exception to be made to the statement that every medical school in the United States is maintaining satisfactory preliminary and technical standards of medical education. The educational problems of 25 years ago are almost completely solved. Whatever remains unsolved can best be left to the medical schools themselves and to their educational organizations—the Association

of American Medical Colleges, and the Association of American Universities.

The Federation of State Medical Boards, aware of changed conditions, revised its Constitution and By-Laws, February, 1930, so that they now contain the following provisions:

"In all matters of premedical education, courses of study, and educational requirements for the degree of doctor of medicine, or its equivalent, the federation recognizes the Association of American Medical Colleges as the standardizing agency for this purpose.

The federation regards as its proper function (a) the determining of fitness for the practice of medicine, and (b) the enforcement of regulatory measures."

The foregoing is the first great step in the reform of the activities of the state boards themselves. In the Commonwealth of Pennsylvania the board is known as the State Board of Medical Education and Licensure. You will please note that in its title, its purposes are indicated as (1) education and (2) licensure, with no mention of regulatory activities. To those familiar with actual conditions, it has long been known that any attempt of state boards to regulate medical education and medical standards was theoretic and not practical. In some cases a vague authority was assumed by the board, under provisions stated or implied in the "act" itself, and was some times exercised in such a way as to lead to irritation and even abuses. It is apparent that state boards are not well constituted or organized to direct medical education. Their function, as now stated in their own constitution, is to deal with the granting of licenses to those qualified, or the withholding of licenses from those not qualified, and to deal with the many problems related to the many forms of medical practice such as the discipline of licensed practitioners and the prosecution of those practicing the various forms of the healing art without legal sanction and to the detriment of the public interest.

If state boards are most effectively to fulfill these functions, in the light of altered conditions having to do with both medical education and medical practice, there must be a change in the point of view, a revision of the medical practice acts, and a reorganization of medical boards. If the foregoing is conceded, we may set for ourselves the task of determining the manner in which such laws shall be revised, and medical boards reorganized.

The law itself determines the organization of the board so that this paper will for the most part deal with a discussion of a medical practice act designed best to meet prescnt conditions of medical education, licensure, and medical practice.

I may say at the very beginning of this part of the discussion that I do not believe that uniformity in state laws is either useful or desirable. Many states have peculiar and special problems. Medical law should be drawn in such a way as best to meet such special needs, but there are, of course, certain fundamentals which should form the basis of a satisfactory state law in all states.

In a general way, it may be stressed that the best law is one of simple construction conferring upon the body responsible for its administration, the broadest possible powers containing the lowest possible number of specifications and restrictions. The present medical practice act in Pennsylvania has become very complex by reason of numerous additions, amendments, and modifications, in the various attempts which have been made to incorporate in the act itself changes and advances in medical thought. This has lead to difficulties in understanding its provisions, and consequent difficulties with regard to its enforcement.

Reduced to the simplest possible statement of its purpose, a medical practice act has two main objectives in view, i. e., (1) licensure of those qualified to practice any form of the healing art, either by examination or endorsement of credentials, and (2) the exclusion of those not qualified by withholding licensure, by the prosecution of illegal practitioners, or by the suspension or revocation of the licenses of those who should forfeit a right already conferred.

Almost since the organization of medical boards, their chief activity has been that of granting licenses to medical graduates by examination, reciprocity, or endorsement of credentials. Comparatively little attention has been given to the regulation of medical practice. In the light of the advances that have been made in the past 25 years, it is apparent that medical boards need concern themselves but little with the licensing of present-day graduates of medical schools. The present-day graduate is so uniformly well trained and qualified that he should be granted licensure by endorsement of his diploma, or by an examination of his official records in the medical schools by a member of the board who would thereafter issue a certificate of proficiency, which would automatically lead to the granting of the license by the board which he represents.

State boards need no longer burden themselves with the laborious and tedious examinations of the recent graduates. Written tests have a very limited value as a test of qualifications for admission to medical practice. To my mind, the abandonment of them, except in the case of limited groups, would be a great step forward, not only in relieving the board of an onerous burden, but in creating in the mind of the recent graduate and in the medical schools a feeling of good will toward the boards, and a desire to coöperate with them. Too often in the past there have been antagonisms engendered between medical schools and state boards, and a feeling of irritation on the part of the recent licentiate at the very moment of his admission to practice. This has resulted in poor teamwork among the profession, state boards, and medical school where coöperation would promote common objects.

I am aware of the necessity for the examination of the graduates of many years ago, which examination should be practical in character in order to give consideration to years of practical experience; and for the examination of graduates of foreign medical schools, and with the last named group, there should be included in some states, perhaps, the graduates of American medical schools not in membership in the Association of American Medical Colleges, although in Pennsylvania it would be well to exclude from licensure, and therefore from practice, graduates of the few American schools not included in such membership.

If I have made my points clear, it is apparent that I regard the great function of the state board to be that of regulating medical practicc. From this standpoint, it is, of course, a police board, created under the police power of the state, exercising its authority for the protection of both the general public and legally licensed practicing physicians.

In the Commonwealth of Pennsylvania, with its 10,000,000 people and nearly 12,000 licensed practitioners, this undertaking is obviously of gigantic proportions, requiring adequate legal authority, a properly organized board, and sufficient funds to accomplish its purposes. Obviously, it is a professional task, and not one to be entrusted to amateurs, functioning casually and incidently by meeting a few times a year, and for the rest

of the time devoting themselves to their personal and private affairs. I believe that I am well within the limits of a moderate statement when I say that professional boxing is better regulated in the Commonwealth of Pennsylvania than is the practice of medicine, and that considerably more money is at the disposal of the boxing commission for the enforcement of its regulations than is placed at the disposal of the board of medical examiners. Yet one body deals with a sport having to do with a small group of individuals, more or less strong in the back but weak in the head, whereas the other presumably deals with the vital problems involving nearly 12,000 professional men, practicing an art of the greatest importance to the citizens of a commonwealth, and constituting in itself an empire of 10,000,000 people.

At the present time, there are few questions involved in admission to medical practice. The real problems have to do with the exclusion of unqualified practitioners, the prevention of illegal practice on their part, and the discipline of licensed practitioners who fail to conform to legal and ethical standards of practice. The most difficult problem of all is that presented by the licensed quack; the better educated and the better trained he is, the more difficult the problem. A clever but unscrupulous man is the most dangerous of all and the most difficult to control.

Upon study, it becomes apparent that the problems are chiefly administrative ones. This means a board so constituted as to bring to bear upon its problems that kind of experience and intelligence which will most effectively carry out the provisions of an act designed to become an effective weapon under proper control. The most important personal requisite is a qualified administrative officer such as an executive secretary, with permanent headquarters, giving his entire time and study to the practical problems; effective administration means in addition, of course, sufficient funds to meet the reasonable expenses of administration. An act, no matter how well constructed, cannot be more effective than the support given it in men and money.

A properly constituted administrative board should be representative in character. The membership should include first of all a certain number of licensed and qualified practitioners of medicine. That provision in our present medical practice act which specifies that the board shall be representative of various schools of practice should be eliminated. I would also elide that provision which excludes from membership any one connected with a medical school since I am strongly of the opinion that a medical board would function far better if there were in membership upon it one intimately familiar with medical education.

In addition to medical members, there should be some one to represent general education, such as a lay president of a university or college. A lawyer would also be useful on such a board; also some distinguished citizen of the commonwealth, who by his previous record had shown interest in the public welfare and who might be considered to represent the public interests. The attorney-general and superintendent of public instruction or special deputies designated by them should also be included.

All things considered, a single composite board would most effectively coördinate all activities having to do with the licensure of any form of practice of the healing art. In the construction of the act, its membership should include a representative of any special form of practice, and an osteopathic member or members, and would consolidate the activities of the osteopathic board with those of the medical board to the end that the same standards of preliminary education and law enforcement should uniformly be applied to similar groups, and needless duplication of boards, standards, and expenses incident thereto be avoided.

It is not to be construed that there should be enforced against osteopaths the same preliminary and technical requirements that would be enforced against medical graduates. Specific educational and technical standards, however, should not be specified in the act itself, but left to the discretion of the board and determined by the adoption of rules, which rules, under the general provisions of the law, would have the full force of the law itself.

Under very broad general powers such an administrative board, by the adoption of rules which could be changed from time to time, should have conferred upon it authority to do the following:

(1) Establish standards of preliminary and professional education for various branches of the healing arts.

(2) Determine the acceptability of medical colleges and hospitals as institutions for the training of medical students and graduates and to establish a registry of such institutions.

(3) Conduct licensing examinations having for their objects the determination of: (a) knowledge of the fundamental medical sciences; (b) proficiency in the application of a knowledge of such sciences to individuals and to communities for the preservation of health, and the prevention, alleviation, and cure of disease; (c) authority to appoint special examiners to accomplish the foregoing.

(4) Grant licenses by endorsement of diplomas, and of the licenses issued by other states and other bodies.

(5) Investigate, conduct hearings, prosecute, and discipline irregular and illegal practitioners.

(6) Suspend or revoke the license of those guilty of illegal or unethical practices.

(7) Require all those licensed to register annually.

(8) Budget annually a sufficient sum to meet the financial requirements of administrative and office expenses.

(9) Appointment of executive secretary, investigators, clerks, etc.

The advantages of conferring broad powers and authority upon an administrative board are obvious. Changes in regulations can be effected without revision of the law. Changed conditions in medical education, medical practice, and the public attitude can be met by a modification or additions to the rules.

The dangers of such a plan are those of investing any body with autocratic powers. The safeguards would be found in the character and size of such a board. Its elasticity as to personnel, the possibility of the inclusion of cult representatives on it are convincing arguments to the public as to its general rather than exclusively medical control. The authority to appoint special groups of examiners is another answer to cult demands; the educational and fundamental license requirements afford ample practical protection against their wholesale licensure.

Pursuing the discussion of the foregoing as well as some of the other essential requisites of a medical practice act, I offer certain further observations.

So-called *basic science* laws of various forms have been enacted into law by six states and the District of Columbia during the past four years. There is no agreement as to what sciences shall be considered basic nor is there uniformity as to the administration of the law. It has been effective in excluding from licensure the more ignorant of the cultists, although renegade

medical students have found in this law an opportunity to enter upon the practice of medicine in a round-about way, under conditions less exacting than would have confronted them in the usual and ordinary course of procedure. Basic science laws raise the standards for cultists, and lower them for medical men. Obviously the qualifications of several hundred medical men admitted to practice each year are of more importance than the qualifications of cultists who, even if licensed, assume only a small part of the responsibility for medical care. As far as the recent medical graduate is concerned, he may be licensed by endorsement of his diploma without detriment to the public interest. The consensus of the best opinion is that while basic science laws prevent licensure of cultists, they have not stopped them from practicing and are of dubious value. Their fundamental defect is their failure to test proficiency in the *art* of medicine in contradistinction to the *science* of medicine. An applicant might demonstrate satisfactory knowledge of anatomy, physiology, chemistry, pathology, and hygiene, as required by the District of Columbia, and be utterly ignorant of the nature, recognition, and treatment of a common disease. The ultimate object of all medical training is practice. No one should be admitted to practice of any kind unless, and most important of all, he unmistakably demonstrates his proficiency as a practitioner. Basic science laws do not in any way test ability as a practitioner. It would be as logical to call a man a carpenter who could name the tools used in that trade regardless of his skill in their use.

If the chief object of a medical practice act be to prevent the licensure of cultists, basic science laws are a fairly effective but not a perfect means of attaining that object. They are no more effective than other laws in preventing illegal practice, and they are weak as applied to graduates of low grade medical schools in this country and abroad, and as applied to students who have failed in medical schools who acquire a diploma from a so-called college of chiropractic without difficulty.

Prosecution of violators of the law should be a responsibility of the department of justice. A deputy attorney-general should be specially assigned to this duty, and should make a special study of medical law enforcement. County district attorneys are often indifferent or inefficient and object to local influences which make them disinclined to prosecute offenders morally supported by influential persons in their home communities.

Cultists are often defended by able talent employed by their state or national organizations, and by a resort to every technicality are usually more than a match for even the best district attorney striving for a conviction. A reason to designate the attorney-general as the prosecutor is that the responsibility is placed with a legal and not with a medical body. The latter is too often accused of being actuated by selfish motives and of endeavoring to drive a trade rival out of business.

The authority to grant a license implies also the right to suspend or revoke it. There should be authority to reinstate conditionally or for a limited period of time. The causes for such action should be specified, and should include at least the following: (1) drug addictions; (2) insanity; (3) crimes and misdemeanors; (4) fraudulent practice or fraudulent representations with regard to diseases and cures (thus provision would reach the advertisers and radio broadcasters); and (5) unprofessional conduct.

Essential to the enforcement of any medical practice act is a corps of full-time, specially-trained investigators directly under the direction of the administrative board and responsible to it for the performance of their duties. They would have to do with illegal practice of all kinds on the part of both licensed and unlicensed practitioners.

There should be compiled, published, and distributed periodically a directory of all those licensed to practice any form of the healing art. The information contained in such notice to those interested is of inestimable help to law enforcement. The omission of a name from such a list at once calls attention to an illegal practitioner. It makes a potential investigator of every licentiate who may supply valuable information to those directly responsible for law enforcement. In time the public would come to know of such a list, and would consult it to determine the status of those about whom there was doubt. Such a directory should be in the waiting room of many physicians.

The pecuniary contribution to law enforcement is an additional advantage. There are objections to imposing upon those licensed any considerable part of the burden of law enforcement. Whatever theoretic objections there may be, they are far outweighed by practical considerations. Annual registration is now required by 21 states, while several others require an occupational tax, which in the State of North Carolina amounts to $25 per year. The registration fee should be about sufficient to cover the expenses of conducting the registration itself, publishing, printing, and distributing a directory.

It is obvious that no medical practice act, no matter how well conceived and constructed, and no administrative board, no matter how carefully selected and talented it may be, will be effective in licensure, regulation and law enforcement unless funds adequate to the financial needs of such an undertaking are budgeted, appropriated, and placed at the disposal of such a board. The executive secretary of such a board should be a man of exceptional ability giving his full time to the work of the board and should receive adequate compensation. Eight or ten investigators should receive an annual salary of from $2000 to $3000 each, and such expenses as are incident to travel and the collection of evidence. Technical examiners should be paid. The foregoing incomplete indication of essential needs makes it apparent that effectiveness means adequate funds for the support of the undertaking.

There is a distinction between licensure as a result of a reciprocal agreement between boards, and licensure by endorsement of licenses or diplomas presented by applicants without regard to the existence of such an agreement. With this distinction clear, reciprocity is mentioned only to condemn it. The question which should be considered when an applicant presents himself for licensure is one of his qualifications. If another body maintaining equal standards and properly organized for the purpose has already determined the satisfactory character of the applicant's qualifications, his license or diploma should be endorsed and a license issued forthwith without regard to whether or not as the result of negotiations, dicker, and agreement, the first body to grant such license extends the same recognition to the second body. The issuance of a license should depend upon the qualifications of applicants; and not the existence of an agreement the result of a bargain between two boards. Bargaining with consequent retaliatory measures of reprisal is unfair to applicants and not in the interests of the public welfare. A deplorable example of the bad effects of basing licensure upon reciprocal action is the situation existing between Pennsylvania and New Jersey for the past several years. If the New Jersey state board refuses to recognize as qualified for admission to the licensing examination one

of its own citizens who is a graduate of a literary college, who has the diploma of a Pennsylvania medical college, and who has served two years in a hospital of first grade because of any action of the Pennsylvania board, no matter how unfair, it is taking an indefensible action, one unjust to its own citizens and not in the interests of the public welfare.

In conclusion, the following constitutes the more important points of this paper:

(1) Concentration of activities of state boards upon licensure and the regulation of practitioners, leaving medical education to educational organizations.

(2) Recent graduates of first-grade medical schools should be licensed by endorsement of diploma, or by participation in the final examinations in the medical schools.

(3) Better organization of boards, with full time executive secretary, sufficient funds, investigators, and clerical assistance.

(4) Membership of composite administrative boards should include practitioners representing all considerable groups of general and special branches of the healing art, medical educators, a lay educator, a layman, commissioners of health and education, and an attorney-general. Possibility of inclusion of representatives of cult groups.

(5) Act should confer broad powers upon the board which by adoption of rules and regulations would meet changing conditions without necessity for legislative action.

(6) Basic science laws are fundamentally defective and are not successful in controlling irregular practitioners.

(7) Prosecution of violators of medical practice act should be delegated to the attorney-general who should designate a special deputy for such service.

(8) Important to regulation of practice is authority to suspend, revoke, and restore licenses.

(9) Annual registration is a valuable aid to law enforcement; the annual fee should not greatly exceed the cost of registration itself.

(10) The evaluation of certificates of secondary and higher education should be delegated to the department of public instruction.

(11) Endorsement of licenses of other boards and bodies, and of diplomas, should be more general, and should not depend upon reciprocal agreements between boards.

Discussion

Dr. John E. Jennings (Brooklyn, N. Y.): I received Dr. Patterson's manuscript a few days ago with delight, and certainly, after I had read it more than once, it appeared to me to be the fairest opportunity to discuss a very clean-cut, logical, and straight-forward exposition of an idea in American medical education as it exists today that I could possibly ask for. It is only fair to say in the beginning that I shall not discuss in the main the details of the proposals Dr. Patterson has made but shall confine myself to some of the basic principles of his paper.

Dr. Patterson said, in the first place, if I may quote him: "It has been said, and I think truthfully, that medical education is usually 25 years ahead of medical practice, and that medical practice is 25 years ahead of medical licensure." I take it that his discussion from that time on is an attempt, if you like, to bring a proposal before us for the advancement of medical licensure. Now, is that quite fair? You see I am considering this from the point of view largely of a practitioner. We have been active in Brooklyn for sometime to have organized medicine get the point of view of the practitioner, to see where it is reasonable and where it is not. Some curious things have happened in the last 25 years and I am not so sure that we can share the doctor's optimism. Our medical critics tell us that if we do not reform we shall have "state medicine." We have noted certain changes that have recently occurred. In the first place, there has been a great increase in specialization; in the second place, a great advance in the cost of medical care; and undoubtedly, among us at least, there has been a great increase of illegal practice. I am speaking as a practitioner of Brooklyn and as a physician of New York State, and I think perhaps in some of these things we have had more trouble than you have had in Pennsylvania. Certainly, I know that of the boys who come to us for internship and for practice those who are the best educated and properly trained come from Philadelphia. Pennsylvania has been somewhat backward in accepting what we in New York have come to call "Flexnerism," and I use the word without hesitation. In other words, we have come to witness confusion in New York State between education and training. I think Philadelphia has clung to the old Greek idea and has not been misled by Hebraic and Teutonic ideals. I think this has a very close relationship to what Dr. Patterson has proposed and is attempting to do.

Why is it that specialization has increased? One of the reasons is because of the smaller schools which have found it harder to exist. Many of them were unworthy of existence, but in Massachusetts they have recently been attempting to rehabilitate some of the smaller schools. The country boy who used to go to the small town school does not go into medicine any more and medicine in New York State is very largely recruited from the urban population, with lower ethical standards and ideals. Perhaps after all medicine is best learned at the bedside. Perhaps the basic sciences are not so important as actual contact with the preceptor. Is it not possible to go too fast and too far in this matter?

Another matter which should be considered as having a rather personal point of view but which nevertheless I am convinced is correct, is the attempt to control medical practice. I think the board of licensure, instead of being 25 years behind medical practice and 50 years behind medical education, should be 50 years ahead. The state governments and boards of education in medicine stand between the citizen and the doctor. It should be the essential duty of such a board to prepare medical education for the conditions which it faces. I think the closest articulation could be with the state boards of health, and its feet should be on the ground firmly based on the actual facts existing and not attempting to trail behind and compel practitioners to live up to their ideals of education in a college which is already behind the times. In other words, I think that a live, active department of education is what is most needed in adjusting the conditions of medical practice to facts as they are. This is a large job for a department of education. It means a great change in its point of view, in its personnel, and in its efforts, but I think it should be done. If it is attempting to enforce some sumptuary laws, from the point of view of the citizen, it is wasting its time.

The attempt of a licensing board to protect the citizen from the cultists is noble in its ambition, but it is futile in its results. The blood of the martyrs is the seed of the church and each persecuted chiropractor will produce two more, particularly if he is persecuted by the people whom the laity feel have an economic urge in that direction. Medical education is not set right to

persecute medical practitioners until the public and the laymen see it in the same light. You know they are charlatans and ignorant but the citizen does not know that, and the large increase in irregular practitioners is a process of repair in the body politic, a process of repair in a disease of the body of medicine.

I will not attempt to say further why I think that an attempt to protect the public from cultists by a board of education is impossible, the general principles that I have laid down are enough. I merely point out the fact that an investigator, a little bureaucracy, attempting to cull out the licensed practitioners and to prevent the illegal practitioners from practicing seems to forget that the citizen believes he has a right to consult any one he likes and that he will simply put the chiropractor, the more this law is enforced, into the unhappy position of a bootlegger. It will simply cost him a little more to fix your investigator, that is all.

To sum up, with the greatest sympathy for all the ideals that the doctor has expressed and with great thankfulness to him for his proposals, we should try to advance the department of education so that it will deal with education alone and leave protection of the health of the citizen to the department of health and the department of justice.

DR. ANDREW F. MCBRIDE (Paterson, N. J.): I quite agree with Dr. Patterson that there have been many and important advances made in medical education in the past 25 years; that practically every medical school in the United States is maintaining proper preliminary standards of medical education; and that the unsolved problem in this respect might be left to the medical schools themselves and to other educational organizations such as the Association of American Medical Colleges. I am in accord with his ideas regarding the federation of state medical boards, when they say they regard their functions to be first a determining of fitness for practice and second enforcement of regulatory measures. It is my firm belief that the laws governing medical examiners should be plain and understandable and should not contain any provision that tends to confuse or disturb applicants. No board of medical examiners should attempt to assume powers that are not conferred rightfully by law. The setting up of standards of medical education might be left to the organizations referred to previously and to law-making bodies themselves who surely are better qualified to do this work. Boards might better devote their endeavors to the granting of licenses to the qualified and withholding them from the unqualified, to the disciplining of licensed practitioners for cause, and the prosecution of any of those engaged in the healing art who are not entitled to practice. These things should be brought about even though it means a revision of medical practice acts and reorganization of medical boards. As to what changes are needed to meet the new and changed conditions, and how best to promote them, these are debatable questions and we will probably find many views suggested here today.

Each state will have to approach the problem for itself, but there are certain fundamentals essential as a basis for the laws of all states. As was said before in this discussion, it is best to have laws of simple, understandable construction, giving such broad powers to the board as will best conserve the public interests. We are all in agreement that the medical practice acts of most of the states have become complex because of the many amendments and modifications that have been made from time to time, for various reasons, and that there is confusion and misunderstanding which makes it difficult indeed to enforce the provisions of these acts. I am in complete agreement with Dr. Patterson regarding the granting of licenses to engage in the healing art. This, likewise, applies to reciprocity for endorsement of credentials; of course, seeing to it that all necessary precautions are taken, also the regulation of medical practice, and constructing proper machinery with which to do it. States should not be parsimonious in providing funds for this purpose. Failure to do this, on the part of officials having government control, is an injustice to residents of such states. The preservation of life and health of the people should be one of the greatest, if not the greatest, concern of the government of any state.

Concerning the constitution of state boards of medical examiners, such as proposed by Dr. Patterson, while this may sound too theoretic and may please some, I personally cannot subscribe to it. Such a board, in my opinion, is impracticable and fraught with great danger. Such boards should consist exclusively of medical men and women, not because I do not have the highest regard for educators other than medical men or for lawyers and for public-spirited citizens of the state, but solely because I believe that members of the medical profession understand better the problems to be met. Reference to the inclusion of osteopaths on such a board brings to mind the New Jersey board. We have an osteopath, a chiropractor, and an eclectic member on our board. They deal with subjects peculiar to their cults. We have no "dual board." The chiropractors previously had a separate board.

This brings up another point in Dr. Patterson's paper with which I cannot agree; when he says that he would not enforce against osteopaths, that includes the other cults, the same preliminary educational requirements that have to be enforced against all regular medical graduates. This to my mind, has been and will continue to be the crux of the question regarding all the cults, and unless we take a firm and uncompromising stand and demand the same standards and requirements from every one seeking licensure to engage in the healing art we will never properly solve this question. I must insist that in the public interest, as I understand it, all who would be permitted to engage in the healing art should meet the same standards of requirement, and when you have provided for this you will have accomplished one of the greatest services to humanity that any profession has ever made.

Annual registration is a moot question. Personally I have no objection to it but many others have and for what they believe good and sufficient reasons.

Concerning the conferring of broad powers on state boards of medical examiners, this surely is all right if the appointing power is careful in selecting the right persons as members of such boards.

Concerning the basic science laws, I think my answer concerning the requirements of the cultists for licensure covers this. I am in agreement concerning who shall prosecute violators of the medical practice acts. As to the suspension or revocation of licenses I am in thorough accord. The only thing that occurred to me in that regard was your fifth cause for the loss of a licensed unprofessional conduct, and I wonder exactly what you had in mind in that respect?

DR. PATTERSON: I would leave it delightfully vague.

DR. MCBRIDE: I thought that was a question that should be thoroughly set forth because I can see great possibilities for trouble there. As regards special investigators, the appointment of the proper person would help to properly carry out the provisions of the medical

practice act. I favor the appropriation of sufficient funds.

As to licensure by reciprocity, I appreciate the distinction between licensure by means of reciprocal agreement of boards, and by endorsement of boards without regard to the question of an agreement between two states. Dr. Patterson's condemnation of this practice has much of merit in it, and much that is harmful can follow the custom which now exists between states. I am glad that he touched upon the deplorable example of this practice in regard to the strained relations that now exist between the boards of examiners of New Jersey and Pennsylvania. That a disagreement so serious in character exists is both regrettable and deplorable, and it should not continue. I wonder if Dr. Patterson and myself cannot devise ways and means to bring about a better understanding in this matter? I had in mind that he as the president-elect of the Pennsylvania State Medical Society and myself as president of the New Jersey State Medical Society might with the aid of a member of the state board of each state, get together, and if we cannot agree we might have a member of the Medical Society of New York act as arbitrator. That came as a suggestion while going over your paper. It may lead to a better understanding and might clarify this whole situation. I wonder if you and I cannot arrange for such a conference to end this very disagreeable situation that now exists?

Dr. Sharpless: I thought perhaps it might enlighten some of the men from other states who are not familiar with the situation referred to, to give a short review of medical licensure in Pennsylvania. The medical society of this state has been vacillating for some years past. Our Board of Trustees proposed, and the House of Delegates declined to accept, the establishment of a nondesignate board. Then there was a basic science law introduced which has received considerable support. I believe if a vote were taken the majority would vote for a basic science law at this time, but that might be wrong, in view of the new and more advanced plan that Dr. Patterson has introduced. I think it will take some education perhaps, not only in the legislature but among the doctors of the state, to get them to give up entirely the idea of a basic science law. In fact, his plan includes most of the good features of a basic science law and I believe there is none of us who has a belief about this matter that cannot be changed by argument and explanation. We were told two years ago that the present law should be changed, that it was only 90 per cent effective, but that we had better devote our efforts to elimination of the chiropractic bill, which was done successfully through the work of Dr. Correll and Dr. Patterson and others. If I thought any law was 90 per cent effective I should like to retain it for I think it would be very difficult to get one to do more than that. I merely wish to make this brief explanation to enlighten the people here as to what we have been doing legislatively in Pennsylvania.

Dr. Harold Rypins (Albany, N. Y.): Assuming that I might be asked to make a few remarks, I took the liberty of bringing along some reprints which I will pass around, as I shall refer to them.

It is certainly obvious that it is a good thing to have these conferences away from home, for you learn things you never learned at home. I have been associated in work with Dr. Jennings but I never realized until today how differently he and I look at this thing, so I have already learned something by coming here.

I shall confine my remarks largely to the Medical Practice Act of New York simply because I have the greatest experience with that act. I have been administering that act and naturally can speak of it with more authority that I can of other acts, and if I do seem dogmatic it is because I have had a good deal of first-hand experience with it and with the laws of other states. I believe I am the only man in this country devoting his whole time to this problem. The trouble with most medical practice acts is that they have been written without having a clear idea of what the act is to accomplish. It attempts to protect the public health by giving the right kind of physicians to the state. There are three things you must do to get the right kind of physicians: first, train and license the right men; second, take out those who have not behaved properly; and third, keep from practicing those who do not meet the qualifications. Every medical practice act must have these three assets and each of them must work successfully; these three things must be integrated. There is no way in which that can be done unless the whole thing is embodied in one act and that act is administered by one board or body.

In the early days the emphasis was almost entirely on education and licensure. We made a good deal of progress for 25 years and I agree exactly with Dr. Patterson that at the present time medical education in the United States is more satisfactory than anywhere else in the world. I have just read the medical report of Europe and there is no question that a careful study shows that American medical education is better organized than anywhere else in the world.

Dr. Jennings has raised the interesting question of whether the state department of education should take a leading part in medical education. To my mind, at the present time, the only real contribution that a state department of education can make to medical education is to leave it alone. In the first place, many of these departments do not know much about medical education. In New York, we think our department knows something about it, but medical education is a national problem. Men trained in New York may practice in Texas and therefore it is not a local affair. There is a national body that knows a good deal about medical education, that is the Association of American Medical Colleges, made up of the deans of all the approved medical schools in the United States. It is a body made up of experts in this field and, having attended its association meetings for seven years, I am prepared to say that it knows its business. It has no legal authority but it has a great deal of moral authority and knows its subject, so what the state can best do for this body is to leave it alone, except to give it the legal backing that the state has.

Dr. Patterson referred to the action of the federation of state boards transferring authority over medical education to this association of experts. I am proud to say that I believe I was largely responsible for this and according to my opportunity I shall continue to suggest that medical schools as now organized are highly intelligent and have demonstrated their ability to regulate medical education and have shown much more progressiveness in changing the types of medical education than 48 near-expert state boards or state departments of education ever can. I think state departments should do their best to back up this national association of experts. On the other hand, this association has nothing but moral force. It will, therefore, be necessary for the state departments to maintain technical control over medical education so that if needed the power is there, but apart from that the best policy is to leave it to the schools through this association.

Because of the very great progress in medical educa-

tion in the last 25 years that aspect of the problem is now reasonably well taken care of. It is not perfect by a great deal but if these schools are left to themselves they can work out the education problem very much better than can the boards and the state departments of education. It was because in the past the educational problem was so badly handled that the states took so much responsibility in the matter and in doing so they neglected two other very important aspects of the problem. They set up educational standards. They required all to meet them but they did practically nothing to those who did *not* meet the standards. That is why so many persons who were not properly educated were practicing. Second, they allowed a man, once he was in, to continue as a practitioner whether he had the intellectual ability and the qualifications which are necessary to a good physician. The emphasis in any modification of the state law must be in these fields, first, to get the proper sort of men to practice, and second, to keep out of practice those who have not met the educational qualifications. I should like to confine myself to those two aspects very briefly.

First the question of the discipline of the licensed practitioner. Because of the large amount of work involved, in New York we have split up and now have a board of medical examiners which does nothing but examine applicants for licensure, and we have a Grievance Committee which does nothing but handle cases of discipline. That is made up of 10 of the leading physicians of the state who serve without compensation, for the good of the profession. It holds legal hearings and recommends the proper discipline to the Board of Regents of the state education department. Only once have the Regents disagreed with the Grievance Committee. The moral effect of this committee has been very great. It has been operating since September, 1928, and has considered 119 cases of charges against licensed physicians. These were not all the charges there were but only the ones in which it was thought that action was necessary. The other group shows charges which should not be brought against the physician, and there was a smaller group in which the physicians really were guilty of improper practice and should be disciplined. When this was put into practice we did not anticipate much trouble about the first group, but we have had a large number ot complaints about malpractice, unethical and unprofessional conduct. Where, ordinarily, one would employ a shyster lawyer and have a lawsuit, they have now found that without hiring a lawyer they can come before this committee and air their grievances. It has been very valuable to the profession and is a by-product which we did not anticipate. All of the cases listed as malpractice, practically all listed as miscellaneous, and all listed as unethical conduct, have been complaints of persons who would ordinarily bring a lawsuit against physicians, and instead of that they have come before this committee, had the situation explained, and gone away satisfied.

In reference to the physicians who have not been practicing properly, the more one sits with that board the more one realizes that the moral character of the profession is at least as weak as the qualifications, and that will be a more and more important thing to look into.

You will see (referring to reprints) that there were approximately 90 cases in which there was some reason to believe the physician had not acted properly. We have attempted to make this a series of elimination tests. Of 93 cases, I was able to dispose of 42 myself. A complaint letter is received, I have an investigation made of the facts of both sides, and if I feel that the physician has been all right I simply write a letter to the complainant saying that the case has been thoroughly investigated and that it has been dropped. Not a single such case has appeared, so far as I know, in the civil court. Many cases have had an informal hearing, that is, instead of serving papers to the physician to appear, we simply write and ask him to appear before a subcommittee. We have no power to enforce that but so far no one has failed to appear and one is usually anxious to have the matter cleared up. Then, we have an informal talk and in most of those cases, without serving any legal papers, we are able to make the physician see that his practice is improper and unless he will agree to change he will have formal papers served on him. In improper advertising there were 14 cases. We have all sorts of things to deal with and all those persons have agreed to advertise properly or to discontinue advertising. That has been very valuable, and it has been done without very much legal work, although we always have legal counsel present. There were 12 cases of ambulance chasing taken care of in that way. If these men were on the borderline, if the case was not proved, but if they were lowering the standing of the physician with the public, they have been made to see it. In these cases the committee decided that no legal action should be taken but the physician is warned and he knows that if he comes up again those papers are still there. So, out of 119 cases, we have already disposed of 93 to the benefit of the practicing physicians and to the benefit of the public and the reputation of medical men generally. The effect of this throughout the profession is notable. Men say: "I do not wish to do this without having your advice whether it is all right; we have heard that you are watching this sort of thing." There were only 18 cases in which we have had to do anything at all severe. We have recommended revocation of only 5 licenses. Of course, that is a serious thing and the man is given an opportunity to have many hearings and this is only done when we are convinced that he is not a proper person to practice. We have suspended licenses in a few cases. In the case of very young men who did not understand what it was all about we told them to go away and study for six months or a year and then come back. We think that is better than taking them out of their livelihood entirely. We have censured some men, around 70, who might starve if their licenses were taken away. In those cases we bring them before the body in formal session and simply "read them the riot act" and it is perfectly amazing how impressive that is. No man likes to be told that he is a disgrace to the profession. I feel that the work of the Grievance Committee, although it is a great burden to the men who serve on it, has done much to raise the prestige of the profession with the public and to impress upon the young men that to be a member of the medical profession means something more than to know medicine, that it means to be a man of character.

It would be ridiculous to go to all these pains with qualified men and to try to jack up their ethical standards and to insist upon a man going to a proper medical school for 6 years, if at the same time you allowed a man who did not do any of these things to continue in practice. It is a proper function of the state to attempt to eliminate unlicensed practitioners and this is being done in New York. I do not say they can all be eliminated but I do say that you can cut them down so remarkably that it is apparent to any unprejudiced person that it is worth doing. On the first sheet you will find my figures for 3½ years that we have been enforcing the medical practice act. We made over 2000

investigations and it was worth the time and money it costs, though 807 showed no cause for action. Sometimes a physician writes in that a man is violating the medical practice act and you may find that he is having an argument with the doctor next door and wants to get him into trouble. Many of them are not violating the law at all, and that is disposed of by making an explanation. Over 1000, or almost 45 per cent are violating the law but these cases can be settled usually without going to court. We wish to stay out of courts as much as we can. If we go to an optometrist who has not the right to call himself doctor we say: "Here is the law, what are you going to do about it?" If he takes his sign down you are through with it. It is work done outside of the law courts that is best. We check up afterward to see whether the violation has been discontinued. That disposes of more than two-thirds of all the complaints. We have actually had 366 cases in the courts and, although that may not sound like very much, we have deliberately selected those cases that could not be handled outside of the courts and if we thought we had an excellent chance to win. We had 137 convictions and only 9 acquittals, and most of them were jury trials in small towns. We have withdrawn 38 cases, mostly cases in which men were practicing and were waiting to get their license. If a man is properly educated we would prefer to get him into the field of practice and not prosecute him.

To summarize, I have classified about one-third under no evidence of violation. Outcome satisfactory includes those in which we won the prosecution or stopped the violation without prosecution. That accounts for about 50 per cent of all the cases. Outcome unsatisfactory takes care of 47. In spite of all that has been said it is clear that we should not insist upon high educational standards unless we can keep persons without them from practicing. Second, we should not insist upon highly ethical standards unless we can keep the persons out who do not observe this, and if we go about it properly we can to a great extent keep them from practicing.

Dr. Jennings is right in regard to making martyrs of these persons. Many of those who are prosecuted will become martyrs to the cause. There are two ways to avoid this: one is to make it clear that the prosecution is not brought by the medical profession, but by the state; and the other is simply the way we are doing it. You should not "razz" them too hard. My difficulty has been in keeping them out of court and Dr. Jennings will agree that with but 366 cases in New York, there has been no hue and cry of persecution. They have not been pushed hard enough to get up a story of persecution. The New York act is working successfully, and it contains the essence of what would probably make a very good act for the State of Pennsylvania.

Dr. Charles B. Kelley (Jersey City, N. J.): Dr. Patterson's paper particularly interests me because it is presented by a specialist in medical education, in a specialty outside of his own field, medical licensure. Medical education and medical licensure are separate and distinct special fields in medicine and I am particularly pleased to know that Dr. Patterson has such well conceived ideas in regard to licensure. There are perhaps one or two things with which I might disagree, but they are only minor, and in general he has outlined the ideal medical practice act which New Jersey has.

When state licensure was inaugurated, approximately 40 years ago, the educational system of medicine was very chaotic. There were all sorts of medical schools and medical graduates. Of course, the most important part of the medical board's work at that time was to separate the good from the bad, or the sheep from the goats, but since 1907, when inspection classification of medical schools began, the work of medical schools has so improved that at the present time the product of the medical school is so good in most instances that examinations by the state have become unnecessary, or at any rate superfluous, and that led up to the resolution of the federation of state boards of which Dr. Patterson spoke and to which Dr. Rypins referred. Even in that resolution there is a discrepancy because the federation of state boards accepted the classification of the Association of American Medical Colleges, whereas most of the classification and certainly the improvements were brought about, originally at any rate, by the Council on Medical Education of the American Medical Association, and even today there is a discrepancy in what is the approved school of the A. M. A. and what is a member of the school of the association, unless it has been recently changed.

Dr. Ross Patterson: That has been changed and the two lists now agree.

Dr. Kelley: Up to this time it became necessary, of course, to say what classification we were using. The word Class A medical school in the strictest sense of the word meant the A. M. A. classification. Now, while the idea of admitting the qualified man to licensure by credentials rather than by examination is undoubtedly correct, still it is impracticable at the present time, although eventually it will and should come. That does not mean a discontinuance of the state board of examiners because there will still be many functions for them to continue. In the first place, there would be the necessity for verification of credentials and it may be interesting to the educators present, that the amount of spurious credentials that come into the state board is enormous, and in that particular regard the plan of Amos and Andy for a check and double check is the only remedy.

The foreign graduate must be taken care of and it is often very difficult to ascertain the standing of the school from which the foreign graduate comes and the only thing you can do is to examine him.

Third, there is the old graduate. It is surprising how many men have been out in practice 25 to 30 years without a license and all of a sudden they wish one. The strictest kind of scrutiny of their credentials is necessary because the medical school of 25 years ago was not as good as it is now. It has been our experience in New Jersey, and evidently in New York, that when a medical man goes bad he usually belongs to the old vintage rather than the recent graduate. Most of our trouble is with the older men. They are men who in many instances have been unsuccessful practitioners in some place and who go into a new location and, often, associate themselves with advertising offices.

In New Jersey, there remains the function of examining the osteopath and the chiropractor, and while there is no doubt that the osteopathic schools are coming up, and I think that may be said particularly of the Philadelphia school, they have not reached the place at which credentials can be accepted in lieu of examinations. There is also the big function of prosecution of the illegal practitioner. Most practitioners do not appreciate the fact that the passing of legislation is not the important part of the work, but that it is the enforcement. In New Jersey we have been particularly active. Our state is only between one-fourth and one-third the size of Pennsylvania so far as the number of practitioners are concerned but we run about 400 and 500 investigations a year and always have from 40 to 75

cases pending in the courts. The only reason we are not doing more is because we do not have the money. We receive no appropriation. We have to take money out of the general funds and our largest income item is the endorsement of licenses from other states. Most of them come from New York. We would rather endorse a license, for which we get $100, than to give a man an examination for $25. We receive about $20,000 a year on endorsements of licenses from other states and $10,000 from New York. We are very fortunate in having as a fulltime inspector a woman who is undoubtedly ideally suited for the work. Second, we have always had an attorney-general who has been sympathetic toward the laws upholding public health.

This next topic touches somewhat upon what Dr. Patterson said about the deplorable condition existing between Pennsylvania and New Jersey. I said previously that there is a difference in classification in medical schools. That seems to have pretty well disappeared now but the difference of classification becomes particularly accentuated when you come to your fifth year of medical education, the hospital year. We have the A. M. A. and the classification of the American College of Surgeons, as well as that of the individual state boards in states in which the intern year is required. Because of these various classifications, conflicts between the state boards have arisen and Pennsylvania has been the storm center. New Jersey is not the only state that has this difficulty for Pennsylvania has had quarrels with half a dozen different states regarding this subject. The Pennsylvania Board has never seen fit to accept any classification except its own; saying the board cannot, according to the law, accept the classification of any body such as the A. M. A. or the American College of Surgeons. Consequently when we broke off relations with Pennsylvania, in 1925, it was over nothing but the intern year. We still accepted Pennsylvania graduates if their intern year had been served in a hospital which we could accept. That went on until within the last year we felt that we had settled it. The Pennsylvania Board still holds to the position that it cannot accept any internship except in a hospital inspected and approved by its own inspection. We have adopted as our classification for the graduate in medicine the fifth year training for the graduate and the A. M. A. classifications. We will accept an internship in any hospital in the United States approved by the A. M. A. for intern training. That includes Pennsylvania also. And we hope that Pennsylvania will some day or other extend us the same courtesy. That is all we are asking and whether they accept the New Jersey hospitals approved by the A. M. A. or not we will accept those in Pennsylvania approved by the A. M. A. We feel that there cannot possibly be anything broader than that.

As to the question of interstate relationship, all the laws of the 48 states are different and if the various state boards wish to bar members of the profession from sister states they can do it on technical ground. New Jersey and New York have no conflict because the heads of both boards attempt to administer the "spirit" of the law rather than the "strict letter" and consequently the interstate endorsement goes on quite happily. It is simply because of this interpretation of the spirit rather than the letter of the law. I feel that it is the same spirit in which this Tristate Conference was conceived and it particularly pleases me to be here today because of that fact. After all, Pennsylvania, New York, and New Jersey are pretty close geographically and we cannot see any reason why the physicians of the three states should not have the freest kind of reciprocity.

DR. SHARPLESS: Some of us here have somewhat the same opinion of the Board of Licensure that Dr. Kelley has expressed. I am sorry that Dr. Green could not be here but Dr. Albertson is a member of that board and we should like to hear from him.

DR. HARRY W. ALBERTSON (Scranton, Pa.): I wish to say that anything I may say in this discussion is not by authority of the Board of Medical Education and Licensure. I do not represent that board today. I am in attendance at this conference by the fact of being a member of it.

I believe thoroughly after 28 years of practicing medicine, 20 years of which have been spent very largely in organized medicine, that there is a whole lot yet to be done in the matter of licensure. I spent some time recently reading the report of the Council on Medical Education and I find there that the supervision of the practice of medicine began somewhere in the twelfth century and that they revised their medical practice act in England in 1922. If they have been at it all these years and we have been at it also for many years it certainly goes to prove that changing conditions bring about situations which we have not been able to foresee.

Several of the ideas suggested in Dr. Patterson's paper are excellent to be put into effect 25 years from now. There is still much work to be done to bring the matter of medical education and of licensing boards somewhere near a working basis, there is a lot of difference between medical education and medical licensure.

The Pennsylvania Board does not accept graduates from all schools in America. There are in New England some schools that have for reasons of their own refused to come up to the standards of the A. M. A. and that are not Class A schools. We do not accept graduates from those schools.

One of the great problems of the Board of Medical Education and Licensure in Pennsylvania has been just the problem that Dr. Kelley has spoken of, lack of funds. I sincerely believe that there was integrity and intelligence and the desire on the part of the board 30 years ago to have kept from our folds many of the so-called cults if they had possessed the money to do so. But they had no money, the cults got a hold, and now the question is a very much more serious one and it takes longer to work it out. I am not at all in accord with the idea that they cannot be kept out. The people are becoming sensitized to the proposition that their health is better guarded by those who have had sufficient training and who are properly licensed to care for their health. The other class will die out if you leave them alone long enough because they have no scientific value. We are gradually seeing that in Pennsylvania. If the Board of Medical Education and Licensure had had the funds to have stopped the first osteopathic school the other cults would not have come up and if the present board had sufficient funds to straighten up the matter now, 20 years from now we would not see other cults come in but if we do not do this other cults will appear and it will take much more time to straighten it out.

As to the matter of an annual registration fee that is quite necessary. It keeps the board in touch with the practitioners in the state and, as has been said, it is a very good plan to keep the public enlightened as to who is and who is not a licensed practitioner. Twice while I have been on the present board an attempt has been made to raise the annual fee. With this I have not been in accord. I cannot bring myself to feel that the medical profession should pay for all of the investigations. There should be an annual fee for registration

but the increase in that fee for the purpose of paying for investigations I cannot quite see. Perhaps I am wrong but I am willing to be shown. Before the days of annual registration in this state there was no money for the use of medical education and licensure. We now have a small amount from the annual registration with an understanding from the department that the money that comes in shall be turned back to the board for its use. That was the idea of some members of the board in raising the fee. I stood firmly on this, not being in accord with it, and as yet we have kept it down.

The fact that two states have repealed their basic science laws recently leads me to believe that these laws are not what we would first have believed them to be, they did not work out well. I have tried to keep in touch with the secretaries of the boards of the states that have had basic science laws and I am led to believe that they are not the best means of keeping out those who would come into the medical profession by the back door.

As to the matter of enforcement, in Pennsylvania we have had the good fortune of having attached to our board for the last few years a member of the department of justice. There is scarcely a meeting at which he is not in attendance, and we frequently have to call upon him for advice. Every board should have a member on it from the department of justice who could speak with some legal authority for the state, although he need not be a lawyer. He is not needed in the matter of prosecution, unless you can get public sentiment in the county in which you wish to bring your prosecution or the coöperation of the court and district attorney. We have often found that a case of illegal practice is brought up in the county and the district attorney or some member of the court has thrown it out because he was not in sympathy with it. We have yet a lot of educating to do to bring the courts and the public to our way of thinking.

Reciprocity seems to have been a very good subject for this morning's discussion. It is very difficult to have reciprocity with other states if there is a difference in laws, not a difference in the matter of interpretation of laws but a difference in the reading of the laws. If a board of medical education and licensure is going to be of any service to the people and to the medical profession, that medical profession must have had something to do with the drafting of the law under which they wanted it to work. There are many things in the Pennsylvania law that might be changed to advantage and if we are going to enforce that law there are certain provisions which are written into it that must be repealed.

That brings me to the question of students from outside our own state. It is useless to examine members of Class A medical schools but men have come into our state of whom we were not sure if they had come from Class A schools and we must have some form of examination for those men. But for graduates from Pennsylvania, or other schools, who have complied with the requirements in this state, an examination by the board is superfluous. Men coming from other states, however, and from foreign countries should not be admitted simply on their credentials for this would be very impracticable. We have no supervision of their education and an examination must be held to determine their fitness.

Dr. Kelley and I have talked over the condition existing between Pennsylvania and New Jersey and I think we thoroughly agree. That matter can be all straightened out easily enough. There is little reason for it in the first place but this all happened before I became a member of the board. It has been a blot on our states that there should be any disagreement.

Dr. Sharpless: One of the men whom we are always glad to see at these meetings and who gives us excellent notes of what is going on is Dr. Lawrence. I suspect that part of his efficiency is because he grew up in Pennsylvania.

Dr. Joseph S. Lawrence (Albany, N. Y.): Dr. Patterson's comment on the matter of the care that has been taken by the state with regard to boxing as compared to the care taken with regard to the practice of medicine is well placed. With my experience with legislatures that is largely because the interest in boxing is represented usually by two or three persons who give a lot of thought to the matter and who propose the regulations that are acted upon by the legislature, and who support them with unity. When it comes to proper legislation for a group of intelligent men, such as physicians are, it is very difficult to draw any regulations, no matter how simple, that will meet with a united support. Somebody finds that it will not work out this way or would be better written that way. Perhaps you have gotten accord and at the last moment some very prominent individuals will discover weakness in the law, and the legislator who started out to support the measure feels that he is never certain about the matter, with the result that legislation is postponed or it is so modified that the original framers of the act hardly recognize it. If we could delegate our authority in matters of legislation we would get along much better. In New York State we have tried to do that in the last few years with very satisfactory results. Our county societies are not permitted to oppose legislation in Albany. They can make any opposition to legislation that they desire through the state society committee and in their own county but they are frowned upon if they attempt to send delegations from the county to oppose a measure that has received the approval of the state society committee.

With regard to our attitude toward the cults, I wonder how it would strike Dr. Patterson to have the suggestion that the medical schools make a point of pronouncing from an educational point of view upon the various cults and their practices? As a matter of fact, the department of education is founded on the acts of medical schools. This was raised last year in our state society committee by members and it seemed an argument that could be answered very readily, for if chiropractic had anything in it why should not the medical schools say so? Why should not the legislators have the advantage of the knowledge of pronouncement of men who are thoroughly trained in medical matters? If legislatures know that the medical schools of the state had made the pronouncement to the public that chiropractic had nothing in it, then the legislators could advance with some degree of confidence. As it is, they are subjected to the arguments of many well-trained men on both sides of the question. Medical men advance their arguments, and arguments are also advanced on the other side by very well-trained and educated men, because the chiropractors usually have well-trained leaders; in New York State, for instance, they have an ex-minister who became a supporter of the cult because his wife failed to respond to medical treatment and did respond very promptly after a chiropractor had been employed, so he is persuaded it is correct and he is a very intelligent and difficult man to meet in an argument.

I was delighted to hear what you said about the

basic science law. It has never appealed to me. It was an opportunity for men with a limied education to get a halfway standing which the public cannot discriminate against.

I am a strong supporter of what Dr. Jennings said in discussing the paper with regard to the division that should be made in the jurisdiction between the departments of education, public health, and justice. It occurs to me that the department of education should have absolute authority with regard to the education and licensure of those who would practice the healing art, after that it becomes a matter of public health whether the individual follows out his early teachings or not. At the present time we are licensed with no strings whatever. We can practice medicine so long as we interpret the teaching that was given us, that is, we are not obliged to follow any school in our care of a case of pneumonia. Two men practicing in the same community may so far differ with regard to their treatment of certain conditions that in their own minds, vice versa, they are doing the worst thing that can be done. That is frequently demonstrated. There is no end of argument on that point; but there is one matter upon which there can be no debate and that is the form of medicine that is practiced in the interests of the public health. If it is not done in the interest of public health that is a jurisdiction for the department of health.

With regard to whether a man is violating the law or not, whether the cults have a right to practice or not, is not a matter for the Department of Education or the Department of Health, but a matter of enforcement of the law and should be entirely in the office of attorney general. In New York, Dr. Rypins collects all the evidence with regard to violations of the law and submits it to a deputy attorney general who proceeds to try the case. In some instances the facts in hand are not sufficient and he loses the case, but if a trained lawyer had collected the facts and been responsible for them that condition could not arise so readily at any rate. There should be that division of jurisdiction.

Registration is of great value. I am a staunch supporter of it but am absolutely opposed to collecting a fee for registration for the purpose of enforcing the law. That has nothing to do with it and is giving the wrong impression to the public. The money we are paying is paid with the idea that we are defending our profession although it is in the interest of public health. We are appropriating thousands of dollars in New York State for the protection of public health and money should also be appropriated to enforce the laws. No fund can be more worthily appropriated by the state than one for the enforcement of the medical laws so far as the protection of the public is concerned.

DR. J. B. MORRISON (Newark, N. J.): There has been a great burdening of our ideas in medical education and medical licensure during the last 35 to 50 years and we are making progress and are getting together and will reach a condition after a while at which we will work in harmony even if we do have to wait for the slow process of the suns. The time is ripe for the medical board in Pennsylvania, the American Medical Association, and the American College of Surgeons to get together and to adopt one classified list of recognition for medical schools and medical colleges and hospitals. When that is done the friction between these states will have been entirely eliminated. There must be some standard, some basis that will be acceptable to all these bodies. The matter, so far as education is concerned, in regard to the cults, could be taken care of if these three bodies could examine the schools of osteopathy and of chiropratic all over the country and classify them as they do our medical schools. If they do not rate up to our Class A schools their graduates could not be accepted for registration. That would eliminate the plea of martyrdom and unless that is done the trouble will always be present. Those of us who have looked into the matter feel that, apart from the osteopathic school here in Philadelphia, they have not a leg to stand on. There has been no such classification, however, made and until it is done we will always be in hot water.

Criticism, to amount to anything, should be constructive and in Dr. Patterson's suggested board it seems to me from our experience in New Jersey that it should be maintained as a purely medical board. Dr. Patterson advocates the addition of a member of the osteopathic profession. I do not believe that should be done. In New Jersey we adopted such a measure and later on we were compelled to admit the chiropractors and they demanded a member on the board. Last year a bill was introduced in the legislature recognizing a member of the said board from the society of chiropodists. The cosmetologists are seeking a separate board and will wish a member on the state board of examiners. Those of you who have your skirts free had better keep them so and retain a purely medical board.

I cannot agree with the suggestion that the same yardstick should not be used in measuring all applicants who apply for licensure to practice the healing art, no matter what school they come from or what they believe. In the interest of public health all should be measured by the same measure. The graduates of the chiropratic and osteopathic schools, and all other cultists, should be measured by exactly the same measure that we use for medical students.

My impression of the basic science laws was that the applicant showed that he possessed certain knowledge prior to his going up before the state board of education but that it did not eliminate examination.

The next amendment to the medical practice act in New Jersey will probably be the adoption of a Grievance Committee as worked out in New York. This committee which allows physicians to bring charges against one another and which allows members of the laity to prefer charges against the physician is a very great advance toward solution of these medical problems so far as the legitimate practice of medicine is concerned.

When Dr. Rypins shows that of 119 cases investigated in 3 years there were 93 convictions, he shows real work, and the fact that these cases are settled out of court, and the disciplinary measures are so effective, goes a long way to convince me of the great efficacy of this new medical practice act of New York.

With regard to the financial application of this law, we have never been able to convince the department of justice that it should appropriate money for the prosecution of illegal practitioners. We have been, perhaps, looked upon as a "medical trust" attempting to protect our own pockets. Four years ago we tried to pass an annual registration act in New Jersey and it would have gone over had it not been that the state board of medical examiners the year before had attempted to pass a similar act containing the statement that if a man failed to register they could revoke his license. That killed annual registration in New Jersey. It has been adopted now in 21 states and after a few years more we may be able to put it through in New Jersey.

The New York bill has another excellent feature for medical men. We tried to pass that act also in New Jersey but could not do so because we had already recognized for chiropodists the title of doctor-surgeon-

chiropodist. That was done because the only decent school of chiropody in America was in Philadelphia and we accepted their graduates with that title, so could not take it away from them. Before very long these subjects that are separating us in the three states are bound to be ironed out and if this question of reciprocity can be settled it will be one of our crowning accomplishments.

Dr. William Pepper (Philadelphia, Pa.): I am unable to discuss the basic science law, as I do not know anything about it. A few words regarding my contact as dean of the University of Pennsylvania Medical School with state boards. We have for several years offered the use of our laboratories to the Pennsylvania board as a place to conduct their regular examinations and I have seen hundreds of applicants go through days of written examinations. I have more and more come to believe that there is a tremendous waste of time and effort in those examinations. Every graduate of every school should not be exempt from taking state board examinations, but from the better schools certainly one might excuse say 95 per cent of the graduates and save all that waste of time and effort. I have heard it proposed that instead of examining every student, for example, at the final examinations of the senior year in each of our Pennsylvania schools, one or more members of the board might be present to see the examination, look at the papers, and study the past record of those students through their 4 years in medical school, and then arrive at a decision as to which men should be exempt from examinations. This question of exemption from examinations we utilize, and possibly it is done in other schools also; a certain percentage of the class is exempt from a certain examination because those students have shown in their work throughout the year that they know the subject. There is no reason why some such scheme could not be devised by state boards which would cut down materially the number of men they would have to examine. A man with a poor record, one who repeated a year, one who turned in poor papers, should be examined, but why examine the men who for 4 years have shown they could turn in good papers? Why subject them to 3 days more of writing papers?

The question of money for the carrying out of one of the duties of state boards, that is the prevention of illegal practitioners and the prosecution of them, etc., should come from the state. The doctors in the state should not be assessed to carry out that work. I approve of annual registration. I have seen instances in which, because of lack of money, the investigation of alleged offenses of physicians has had to be held up. For example, a few years ago I was told that there was a young man here in Philadelphia who had a University of Pennsylvania diploma, that he was treating patients, and that there were prescriptions of his in drug stores. Posing as an inspector of the Water Department, I got into his house and saw the diploma, which was a very good imitation. With an inspector who was furnished by the Pennsylvania board we seized the diploma. We thought we had put this one man out of business but soon afterward I heard that he was on the staff of the Philadelphia General Hospital as an assistant to Dr. Ludlam. I asked Dr. Doane if there was such a man on the staff. He said yes, that he had called on him and showed him his card carrying an M. D. and office hours. I wrote to Harrisburg and asked if they could get after him. Unfortunately, the force was limited by lack of funds and weeks went by and nothing was done. I had asked Dr. Doane to keep quiet about it until we could catch this rascal but finally he could stand it no longer and sent for Dr. Ludlam and the man was ousted at once. So far as I know, he has never been caught. That is one of a hundred examples of how for lack of funds and lack of personnel that sort of thing cannot be reached.

Another point of contact I have had with the state board, wherein I would like to mildly criticise the literal interpretation of the law, living up to the letter of the law rather than the spirit of the law. We have had one of two examples in which we have called a man to a teaching position from outside the state, a man who for 10 years has practiced and taught as a specialist, and then we found that he had to put in a certain number of weeks in obstetrics and deliver a certain number of women before he could get a license to practice in Pennsylvania. It is rather discouraging to a man of middle years who has been recognized as a specialist and has been teaching in that specialty and who I would be willing to wager would never engage in obstetrics, to send him to a hospital for 6 weeks and have him deliver a certain number of women. That is the law and it is perfectly right for the board to say "he may take up obstetrics later," but there is so little probability of that and too much attention to the letter of the law there.

We are all much interested in the New Jersey and Pennsylvania differences of opinion about hospitals and more than pleased that there is a likelihood of ironing out the difficulties. It is an interpretation of the wording of the law and it is very hard to get around it. There are difficulties on both sides but they ought not to be insurmountable.

A committe similar to the Grievance Committee in New York State would be an ideal thing in Pennsylvania. The discussions I have heard here today have given me a high opinion of the seriousness with which you of the Tristate Conference are considering these problems and the amount of study that you have given to it. I used to think sometimes that the state boards years ago did not really make serious efforts to comprehend the whole complicated problem of education and licensure but the more I attend this sort of meeting the more convinced I am that you are doing your very best and those of us who are in the educational field want to congratulate you and thank you for all you have done.

Dr. William Pearson (Philadelphia, Pa.): Obviously, I represent a minority in medical education, representing the homeopathic branch of the school of medicine. The chief criticism I would have of Dr. Patterson's proposal is that absolutely no recognition whatever is suggested for the homeopathic school. We in Pennsylvania represent approximately 10 per cent of the physicians. We have our own state society which is very flourishing and a fine organization. There is no question in my mind that my colleagues would criticize me were I not to mention this apparent oversight.

The general proposition of revising our medical laws is commendable, and, it is a thing that should be avoided to subject all graduates of all the schools to these searching examinations. The examinations in our various medical schools are unquestionably more searching in the 4 years, and particularly in the senior year, than can possibly be given in the short space of a very few days by a state board.

We are in the age of mass production. Until the present time and probably for a good many years to come the demand for graduates is and will be greater than the supply. The difficulty is furnishing adequately

trained physicians to the locations in which they are most needed. All who are engaged in college work receive letter after letter from chambers of commerce, mayors, and influential citizens of small towns requesting that physicians be sent to their respective communities owing to the great need for general practitioners of medicine. That particular field has evidently been quite neglected, although we appreciate that the young man who has been trained in our modern medical colleges has no desire to bury himself in some crossroad town. Also, as one of the gentlemen brought out, we have a great increase in the number of specialists. This body, representing the state boards of three important states, should concern itself with the general problem of distribution of physicians, as well as the problem of licensure and selection of the properly trained individual. I would merely add to the suggestion of Dr. Patterson that the homeopathic school of medicine be represented in these plans for a revision of the various laws. We represent a respectable minority in the practice of medicine and I am happy to say that the whole tendency at the present time is to become more tolerant rather than to express the opinions of our forefathers in medicine who condemned without any hesitation any one who failed to agree perfectly with their particular ideas. The homeopathic school of medicine, as you know, was organized by the very best minds of the medical profession and, as William Mayo said without any hesitation, the crime that Samuel Hahnemann suffered was in being born 80 years before his time when he proposed a system of therapeutics which was not in accordance with the customs of the particular time but which has been shown unquestionably to be in accordance with the best theories of immunology and scientific medicine at the present time. There is no need to apologize because we happen to have a little bit different opinion in regard to the application of drugs. Our students are as well prepared to practice general medicine, are perfectly aware of their responsibilities, as the graduates of any other medical school, so naturally we are entitled to proper consideration in these proposed plans.

Afternoon Session

DR. PAUL CORRELL (Easton, Pa.): My relationship to the question under discussion has been to the legislative rather than the educational aspect. The medical schools can be trusted to turn out a satisfactory product—physicians ready for licensure.

I do not agree with Dr. Jennings regarding impracticability of enforcing the law. Pennsylvania could be cleaned up in 6 months if we had the funds with which to prosecute irregular practitioners; and we must clean our own house, get rid of the regulars who are guilty of misconduct, as well as attack the cults. The Pennsylvania Medical Society would welcome a Grievance Committee. We need to have our law amended and made so definite that there will be no bickering over the crossing of a *t* or the dotting of an *i*, for we not only have had differences with the New Jersey board but have had differences of opinion among ourselves.

DR. MORRISON: Before we proceed further I move that the secretary be instructed to send messages of sympathy to Drs. Vander Veer and Donaldson, absent because of illness, and to Dr. Sadlier who has been so regularly with us.

DR. SHARPLESS: The motion has been adopted.

DR. HARRY W. MITCHELL (Warren, Pa.): A word as to the investigation. There are some problems which I think Dr. Rypins presented very ably and kindly and usefully for the profession. He would divide the irregularities of physicians into two groups—crimes and misdemeanors. The misdemeanors are handled by the committee; the crimes, which are punishable by law, are very properly turned over to the department of justice. To what extent Dr. Patterson would have these investigations made by the board which he proposes, and to what extent the attorney general or his office would take action in suppressing many of the crimes, I do not know. That would be a point of very delicate consideration and require a great deal of thought. In this state it is almost impossible, in many instances, to get a conviction if the people of the community have an idea that the medical society is making the investigation of a man simply to get rid of a disagreeable competitor. It would be almost impossible to get a jury verdict and if so the judge will name a small fine and the man will go home and laugh at the doctors, and the community will support him. Our law must be drawn with such care, precision, and fairness for all persons who practice the healing art that it will win the support of the right-thinking members of the community. Any person practicing any branch of the healing art should have an elementary education and the schools for professional training would have to be adjudged by the medical schools of today by some one whose opinion would be final, and would not leave the onus upon the members of the medical profession who, as many people think, are trying to rid the town of a competitor.

It was pleasing to hear Dr. Kelley say that in the difference of opinion which had unfortunately existed between Pennsylvania and New Jersey, that New Jersey had settled it. At first I could not help thinking that when two people disagree it is elementary logic to say that neither can decide it for the other, but he supplemented his statement by saying that they had appointed the American Medical Association as a third person and that New Jersey was holding out the olive branch to Pennsylvania to receive the licensure from any well regulated hospital with a suitable medical degree that would apply in Pennsylvania. Now it would seem as if the law in Pennsylvania would not bring about a similar fair decision and that that law should be changed in some way. I am told by Dr. Albertson that the A. M. A. has sometimes used poor judgment in this state, in his opinion, by failing to give approval to a good hospital and to others not so good it has given its sanction. It would be very easy for the well-meaning people of New Jersey and Pennsylvania to get together, go over the list of hospitals and cross out any which they would not approve of, which would do away with this rather unpleasant situation for the young man who wishes to practice.

DR. ROSS PATTERSON (in closing): A good deal of that which I have said, I myself regard as tentative. It was intended to be provocative of discussion and in that respect it has succeeded admirably well. I am indeed grateful to all these gentlemen who have come here and have given us their points of view and the benefit of their thoughts upon these matters. I am rather surprised that there has been so little difference of opinion and no more divergence of thought about a number of matters that were touched upon in my incomplete paper.

There are just a few comments that I wish to add more by way of clarification than anything else. In the first place, let me say that I had no thought of making any suggestions either to New Jersey or to New York in the matters concerning their own medi-

cal practice acts. Rather, I hoped to get from them, as turned out to be the case, the benefit of their own experiences. We all know of the splendid work which Dr. Rypins has done in New York and we know that in New Jersey they are being very successful in their handling of the problem of restricting certain practitioners to the limits of practice for which they were licensed.

Dr. McBride touched upon the question of the same preliminary requirements for all those admitted to any form of practice. I am sure that I disagree with him. The thought I had in mind in suggesting a composite board was if possible to bring in the osteopaths, for instance, into the board and get their coöperation rather than their opposition, which might help solve some practical problems. If that is to be done it could be done only with an understanding that the same requirements of preliminary education should not apply to osteopathic schools as are applied to medical schools. Theoretically, I would be in favor of exactly the same requirements. Practically, I am not sure that I would hold out for that. It might work, for instance, very well to give a general board broad powers, to let them specify that those admitted to the practice of osteopathy might have enforced against them only one year of college work, whereas those admitted to unrestricted practice should have a requirement of two or three years. Theoretically, I can see that the requirements should be the same, but if a composite board is to be formed it would be necessary to concede something to them in the matter of preliminary requirements. That is a debatable point.

Dr. Rypins' discussion brought out very well a matter that is in my mind, and that is the improvement of conditions in the practice of medicine. One of the most important works before organized medicine is to see to it that standards of practice and ethical standards in the profession are kept on a high plane. Before we are in a position to argue with others as to their practices we should be sure that our own house is in order. The work of the Grievance Committee must be very helpful in that way and must accomplish a great deal of good in elevating medical ethics and the standards of medical practice.

To Dr. Kelley I wish to say that I had no intention of sitting in judgment upon the merits of the controversy, if one exists, between Pennsylvania and New Jersey. That is a matter that should be settled between the boards themselves and I did not intend to express approval of criticism of either board, but merely to call attention to the difference of opinion and that it would seem that it should be settled. My practical experience grows out of the fact that in a number of instances the graduates of the school of which I am the dean, who have served in hospitals the standing of which cannot be questioned, have met with some difficulty in securing licensure in New Jersey. That was several years ago, however, and I know of no instance lately, but the impression still prevails among certain students that they may encounter difficulties.

As regards the registration of physicians, I have thought about that a great deal. It seems to me that the middle ground is perhaps the best, to have a fee paid for registration, at least to cover the cost of the registration itself, the publication and distribution of the register, and perhaps it should go no further than that. It is perhaps doubtful if the state itself would be willing to pay the expenses of registration and the preparation of a register, its publication, and distribution. As a matter of fact, is it practical to require physicians to register unless they are required to pay at least a nominal fee? Perhaps the present fee is satisfactory but the advantages of registration seem to me so great that the theoretic objections to it, at least based on a small fee, do not weigh heavily.

Dr. Pepper's discussion brings out the importance of not including in a medical practice act too detailed specifications and requirements; that it is better to have the act itself fall down in its provisions than that it should confer upon the administrative board very broad general powers. As an example of the extremes to which medical boards have gone in the past with regard to inclusion of specifications may be cited the medical practice act of the State of Utah of a number of years ago into which was incorporated the so-called model curriculum of the American Medical Association, in which with circumstantial detail was set forth the requirements of the medical course, the number of hours which should be given to each subject, the number of hours for lectures and for laboratory work in each specialty. That is an absurdity of extreme degree but it shows that there must have been at that time, not only in that state but in others, a wrong idea as regards the medical practice act. We have in our Pennsylvania act today a provision which is a dead letter, unless it has been repealed, with regard to military service. In the enthusiasm and the distorted point of view that prevailed at the outbreak of the war there was incorporated into the medical practice act a provision that every man admitted to licensure must have received military training. That is an example of inclusion of specifications that should be left to the adoption of rules by the advisory board.

Dr. Pearson has raised a question which was not at all in my mind. I am in absolute agreement with what he says, that there should be on any board in Pennsylvania representatives of all graduates who have any considerable interests at stake, but it is unwise to specify in the act that there should be regular practitioners or those representing homeopathic or oseopathic schools, or any specifications of any kind. In the organization of such a board there should be in the membership representatives of each branch of medicine. Perhaps there ought to be a representative of the graduates of most of the schools. It makes for better coöperation and understanding and support of the law, but it seems to me that the elimination of all specifications is wise. The provision in the present law excluding those attached to medical schools from membership in that board is not in the best interests of the work of the board. On the contrary, there should be on that board some one who would broadly represent medical education, irrespective from what particular medical school he would come. I could name a half-dozen of my friends in other medical schools that I would support with the greatest cordiality for such an appointment and would feel that all the broad interests of medical education would be represented to the advantage of the board itself and to the advantage of the medical profession in Pennsylvania.

One of the chief advantages of more or less automatic granting of licenses to those whose qualifications can hardly be questioned as regards recent graduates of first grade medical schools is that it makes it possible to examine the questionable group by a far better examination than the one now held. If examination is restricted to those of doubtful qualifications, its character might well be altered, having for its object the careful testing of those of doubtful abilities who concentrate on that particular problem. The graduates of foreign schools, the older graduates, graduates of schools now out of existence, might very well have an examination to test their qualifications for the practice of

medicine, perhaps putting aside somewhat their knowledge of the theory of medicine and the knowledge of the fundamental branches.

We have had a good deal to say about cultists and the reason for opposing them. Perhaps a great many of those who oppose cultists do so without thinking out very clearly the reason for their opposition. To me the chief reason for opposing the licensure of cultists is that they cheapen the practice of medicine; they lower the tone of practice of all kinds; they lessen the pride that we have in our membership in a profession which practices a form of the healing art. If we are to retain intact the ideals of the profession and to preserve its knowledge and hand it down to our medical posterity we must be sure that it is not contaminated and diluted by the injection of irregular and unsound forms of practice by those of little general education and whose technical training, if you could call it such, is wholly bad.

DR. JOHN J. JENNINGS (Brooklyn, N. Y.): I had not expected to discuss this paper twice. What I meant to say essentially was that it appeared to me that the problem of licensure depended not only upon the proper ratification by the governing bodies of the state of the fitness of the individual to practice medicine, but that it should also to some extent at least take cognizance of the fact that the changing necessities and changing adaptations of the provisions to practice need to be recognized; that the medical profession in its relation to the public is on trial; that the defense against such trial depends very largely upon our educational bodies in the preparation of students for actual practice. It is the tendency of academic bodies to segregate this somewhat from the actual necessities and demands of practice as such. Some coördinating body seems necessary in some of our states. One of the functions of the department of education is that of granting licenses and it is to be hoped that things might be so reversed that the boards of licensure might be ahead of the departments of education rather than 25 years behind.

DR. REIK: Dr. Morrison turned over to me a letter received from Dr. Olin West, General Manager of the American Medical Association:

March 6, 1930

DEAR DR. MORRISON:

At the Portland Session Dr. William Allen Pusey introduced a resolution that was adopted by the House of Delegates providing for the compilation of a comprehensive statement for the guidance of the American Medical Association concerning the practice of medicine by corporations, by clinics, by philanthropic organizations, by industrial organizations, and concerning the relationship of physicians thereto.

The Judicial Council has given this matter its very careful consideration and finds that the task assigned to it is one of tremendous scope. It seems to be apparent that the Council cannot prepare, in time for presentation at the annual session to be held in Detroit, any statement that will thoroughly cover all the subjects embraced in the resolution.

The Council is anxious, however, to be in position to submit a statement that will be presented as a sort of progress report and desires to make its statement as inclusive and as helpful as possible. To that end I have been instructed by the Council to write to a number of outstanding men in the profession to ask their views with respect to the various matters with which the resolution is concerned. It is the purpose of the Council to use this material in the preparation of its report to the House of Delegates.

I can assure you that any statement that you will offer will be sincerely appreciated.

Very sincerely yours,

(signed) OLIN WEST.

That resolution was referred to the A. M. A. for consideration and they will not make a report this year at the annual meeting but will consider it for another year. This letter was sent to Dr. Morrison as a representative of the profession and he modestly wrote Dr. West that he was turning it over to this conference with the hope that we might give it some consideration.

DR. PATTERSON: Isn't it a little out of line with the purposes of this organization?

DR. REIK: I think Dr. Morrison's idea was that this organization, representing so large a slice of the profession, about 20 per cent of all the doctors in the country, might present views that would be more authoritative than the views any one individual could give.

DR. MORRISON: In conversation with Dr. West I have learned that he is very keenly interested in the procedures of this conference. He has been hoping that the time would come when we would broaden our scope, representing as we do 25 per cent of the medical profession of America, and seek to outline legislation, that we would become a potent factor perhaps in giving opinions on medical subjects of interest to the whole profession, so, when he wrote me this letter asking Dr. McBride's and my opinion it seemed to me that here was an opportunity to show Dr. West that we might help in a broader field.

DR. PATTERSON: Then I would move that a subcommittee be appointed to consider the question.

This motion was duly seconded and carried.

Dr. Reik stated that the next place of meeting would, according to custom, be in Atlantic City, New Jersey, some time in late October or early November, and he extended an invitation from the New Jersey Society to that effect.

Dr. Sharpless, on behalf of the other members of the conference, accepted the invitation and stated that the program would be left to the New Jersey members, according to the plan followed heretofore.

HENRY O. REIK, M.D., *Secretary.*

Nurses on the Frontier

City dwellers have fallen into the habit of thinking that the polar regions and the air are the only places left for hazardous exploration and adventure. The Western Frontier has been pushed into the Pacific, but it moved along so rapidly that in great stretches left behind there are conditions of most primitive living.

In one of these, the isolated mountains of Kentucky, modern transportation, schools, and medical care are unknown.

The nurses of the Frontier Nursing Service, of which Mrs. Mary Breckinbridge gave a report in January, have been facing extraordinary hardship during the five years since it was established. Six health stations and twenty nurses are in the field at present. To cover the thousand square miles of their territory and to reach the hundreds of children who are in special need of care, the nurses are sacrificing contact with all urban civilization and comfort. They ride horseback through all kinds of weather over uncertain trails to bring relief to the most remote cabins. It is a work that makes its own plea.—*N. Y. Times.*

Tuberculosis Abstracts

A Review for Physicians

PREPARED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Published through the coöperation of the Pennsylvania Tuberculosis Society and the Medical Society of the State of Pennsylvania

A VIEW quite generally held by the public and all too often encouraged by physicians is that tuberculosis does not occur in old age. Osler called attention to the surprising prevalence of the disease in the aged, particularly in institutions. He noted that it is usually latent and runs a slow course, and that the diagnosis may easily be overlooked because of the emphysema and co-existing bronchitis which mask the symptoms of the underlying tuberculosis. In a recent article, Myers and Anderson epitomized the literature on tuberculosis among older persons and reported 37 cases of frank pulmonary tuberculosis in men and women from 50 to 80 years of age. Abstracts from this article follow.

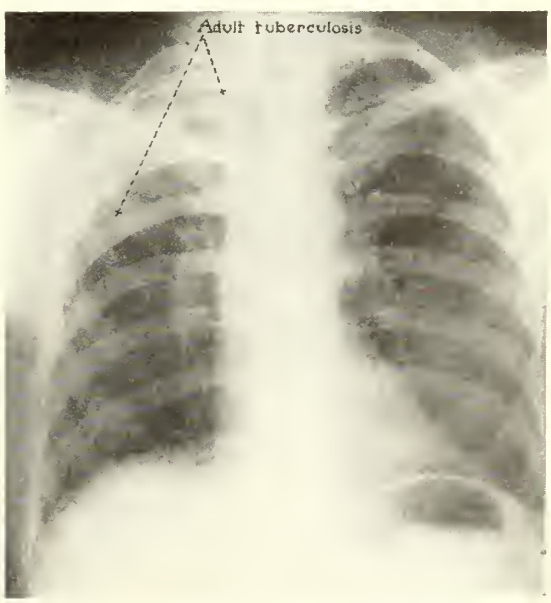
Tuberculosis Among the Aged

Tuberculosis in persons between the ages of 50 and 90 years may be of all types that are ordinarily seen in the earlier years of life, but the chronic indurative and ulcerative types seem to predominate. Taubert found tuberculous caries, meningitis, and miliary disease, and Schurmann reported a recent primary complex, in addition to an old primary complex, in the lung of a man 72 years old. Fried reports a patient 59 years of age with tuberculosis of the lung hilum, which resulted in death.

Symptoms and Physical Signs

Although anatomically the tuberculous process in the aged may be very extensive, it is clinically mild, and symptoms are frequently entirely absent. Night sweats, fever, and hemoptysis are rare. The patient may experience some dyspnea on exertion. Usually, there is cough of long standing, but expectoration is likely to be absent. In most cases, the symptoms are those commonly attributed to emphysema, chronic bronchitis, or cardiac changes.

Physical signs also may be slight or absent; even râles are rarely elicited. Auscultation is difficult because the signs of emphysema overshadow those of tuberculosis. The x-ray is a valuable aid; in fact, it is often the only means of making the diagnosis. The tuberculin test, as Krause says, is the only procedure which, unassisted, can settle a diagnosis of tuberculosis, though only in a negative way. It should be done, therefore, in every case, for, if negative, tuberculosis may be confidently excluded. Tubercle bacilli should be searched for. Goldman and Wolff examined routinely the sputum of institutional patients and found bacilli in 2 per cent of 339 aged persons, none of whom was suspected of having tuberculosis.



Age 70 years. Pulmonary tuberculosis diagnosed soon after attack of pneumonia 45 years ago. Roentgenograph taken July, 1928.

The Dangers

The aged patient himself has little to fear from the tuberculous condition, but the danger to his associates is great. Numerous cases of children having become infected and diseased through exposure to grandparents or other elderly members of the family are on record. The hazard is all the greater because usually tuberculosis is not suspected, and the usual precautions are not taken.

A case is cited:

In a luxurious home in Paris, father and mother in the best of health and with excellent past histories, three boys, one after the other, almost at the same age, died of tuberculous meningitis. Investigation led to the governess, more than 60 years old and a sufferer from chronic bronchitis, emphysema, and asthma, which proved to be a case of torpid, senile tuberculosis. She was detached from the family. Nothing else in the home was changed. Subsequently two children were born and nursed exclusively by the mother. "One is now approaching 30 years, the other is a superb girl of 25 years."

Treatment

A radical change in the habits and mode of life of the aged tuberculous person is probably not advisable. Teaching them to prevent the spread of their disease is the most important requirement. If the disease is unilateral, artificial pneumothorax may render the sputum negative and thus make them fairly safe associates.

Summary

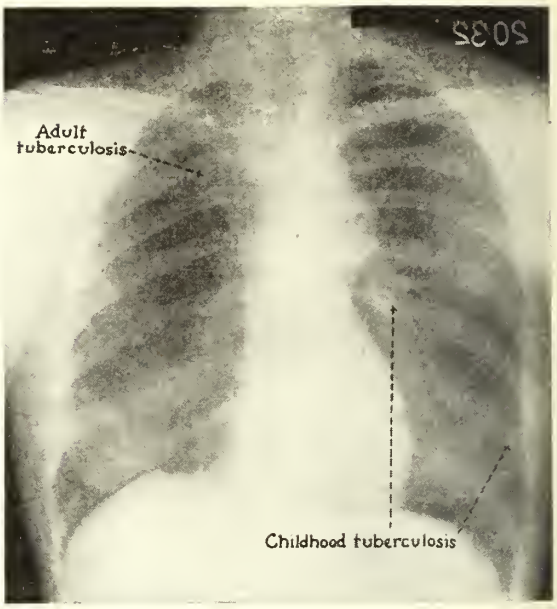
The authors, from their review of literature and studies of their own cases, make the following conclusions:

1. Thirty-seven cases of frank pulmonary tuberculosis in men and women ranging from fifty to eighty years are reported.

2. In 9 cases, there had been definite exposure to tuberculosis, usually to members of their families in early life.

3. Among the children and grandchildren of these 37 men and women, tuberculosis is known to exist in 13 cases. It has been impossible to examine more than a few of the children and grandchildren.

4. The symptoms in the aged cases dated from 6 weeks to approximately 45 years before we saw the patients. In 6 cases, hemorrhage was the first symptom, and in 5 others it has occurred during the course of the disease. Pleurisy was the first symptom in 6 cases. Cough, frequent colds, bronchitis, and catarrh were the first symptoms in 20 cases.



Age 63 years. Both childhood and adult types of tuberculosis present.

5. On physical examination, all signs were elicited from those of the most advanced disease to those of a normal chest.

6. Tubercle bacilli were demonstrated in 21 cases. We are cognizant of the fact that a negative finding on a few examinations in the remaining cases is of no significance.

7. The cutaneous tuberculin test is of great value in chest work among the aged. Some have not been infected, others have "burned out" their infections; therefore, a negative test is of great significance.

8. X-ray film examination should be made in every case. Without it, many frank cases of tuberculosis and other chest disease will remain undiagnosed.

9. In treatment, such a high degree of conservation is not necessary as is practiced among young adults. When the disease is unilateral and progressive, artificial pneumothorax may be possible. Even extra-pleural thoracoplasty may be indicated in the earlier years of this age-period.

10. Tuberculosis in the aged is one of the great problems from the standpoint of epidemiology. Its danger lies in its mildness. Many cases are not diagnosed until very late in life, and not a few are first diagnosed at the post-mortem table.—*Tuberculosis among the Aged, J. A. Myers and H. R. Anderson, Amer. Rev. of Tuberc., April, 1930.*

THE MEDICAL SOCIETY
OF THE
STATE OF PENNSYLVANIA

SCIENTIFIC PROGRAM

EIGHTIETH ANNUAL SESSION

Johnstown, October 6 to 9, 1930

GENERAL MEETINGS

AUDITORIUM, STATE THEATER, MAIN STREET

Tuesday, October 7, 10 a. m.

Stenographer—Miss F. E. Dillan, 1808 N. Pennsylvania St., Indianapolis, Ind.

Call to order by the President.
William T. Sharpless, West Chester.

Invocation.
Rev. Robert M. Campbell, D.D., *Pastor of the First Presbyterian Church,* Johnstown.

Report of Committee on Necrology.
George C. Yeager, *Chairman.*

Address of Welcome.
Hon. O. Webster Saylor, *Mayor City of Johnstown.*

Address of Welcome.
Joseph J. Meyer, *President Cambria County Medical Society.*

Presentation of Program.
Charles H. Marcy, *Chairman Committee on Scientific Work.*

Announcement of Scientific Exhibit.
Horace B. Anderson, *Chairman Scientific Exhibit.*

Announcement of Entertainments.
Olin G. A. Barker, *Chairman Local Committee on Arrangements.*

Introduction of Delegates from other Societies.

Installation of President Patterson.

President's Address.
Ross V. Patterson, Philadelphia.

Wednesday, October 8, 10 a. m.

AUDITORIUM, STATE THEATER, MAIN STREET

(Note—Essayists will please deposit original copies of their papers with the secretary when they have finished reading them. The Journal will not accept carbon copies.)

(Note—The ringing of the bell, announcing the beginning, the division, and the conclusion of each 55-minute period, is beyond the control of the presiding officers. Ample warning of this fact, with frequent reference to time allotted, has been given all who appear on the program.)

10-10.55 a. m. Case Reports

(Five minutes each)

1. A Case of Myxedema with Primary Edema (10 minutes).
Clara L. Davis, Philadelphia.
2. Hernia Through the Gastrohepatic Omentum.
Robert M. Entwisle, Pittsburgh.
3. Congenital Hernia with Removal of the Undescended Testicle.
Joseph P. Replogle, Johnstown.
4. Carcinoma Cervix Uteri, Producing Retention of Urine.
Frank C. Hammond, Philadelphia.
5. Acute Megaloblastic Anemia of Pregnancy.
James S. Logan, Pittsburgh.
6. A Case of Localized Empyema at the Right Apex.
Frank G. Scharman, Johnstown.
7. Hodgkin's Disease with Invasion of Spinal Column, Pressure on Cauda Equina, and Degeneration of Posterior Columns of the Cord.
John M. Johnston, Pittsburgh.

11-11.55 a. m.

Some Present Day Therapeutic Measures (55 minutes).
Charles R. Austrian, Baltimore, Md. (guest).

12 noon-12.55 p. m.

Diphtheria Immunization (15 minutes).
Henry J. Benz, Pittsburgh.

Outline. Why should we immunize? Diphtheria morbidity and mortality statistics in Pennsylvania. Experience gained by massed work. Results given to the medical fraternity and to the public. Methods and material used: Horse serum toxin-antitoxin, goat serum toxin-antitoxin, and toxoid (Ramon). Results with each of the above as to reactions: Anaphylaxis and final immunity findings by Schick test. Who is responsible to conduct diphtheria immunization campaigns—private physicians or health departments? Results of recent campaign in Pittsburgh and methods used. Vision of the future. Compulsory immunization law requiring immunization of all children before being admitted to school, preferably by the family physician, the final recourse being, however, the department of health.

An Evaluation of Radium and Roentgen Rays in the Treatment of Advanced Cancer (15 minutes).
Bernard P. Widmann, Philadelphia.

Outline. Value of radium and x-rays in the treatment of early cancers of the skin, mouth, cervix, and sometimes of the breast incontestable. These agents of distinct value in many advanced and inoperable cancers. While palliation may be expected in advanced cases, this effect is attained in varying degrees according to the particular cancer sensitivity to radia-

tion and the technical measures employed. Good results may be expected in many instances, but only with a trained personnel and carefully planned and estimated doses based upon physical measurements and qualities of radiations that will permit adequate treatments to the affected areas. Many hopeless and advanced cancers are radiosensitive. Statistical studies difficult to evaluate in this advanced group of cases. Future progress of radiation demands a more universal training of physicians in the application of these agents and intensive efforts to build up radiation clinics in all institutions in coöperation with the surgical and pathologic departments.

The Relationship of the Physician to the Mentally Retarded Child (15 minutes).

HORACE V. PIKE, Danville.

OUTLINE. From the mental hygiene standpoint, no more important obligation is placed upon the physician than that associated with the scientific treatment of the mentally handicapped child. These children if neglected will later become problems of society. Recognition of handicaps and scientific treatment of same will in a large percentage of cases convert these potential liabilities into definite assets. Mental handicaps of far greater significance than physical handicaps, and it is during childhood and adolescence that later neuropsychiatric manifestations are very frequently conditioned, and the physician should assume the same attitude toward mental handicaps that he takes in any other problem of public health. Approach to this problem through three channels: preventive measures, early recognition, and scientific treatment. This latter should embrace an evaluation of the relation of physical disease to abnormal mental functioning, and understanding of important rôle played by the instincts and emotions in the child's development and reactions brought about by faulty environment in both home and school; and with these in view the physician should become the advisor not alone in questions of acute physical illness, but as to the training of the child in the home, and the securing of proper educational instruction in the public schools.

Thursday, October 9, 2 p. m.

BALLROOM, SEVENTH FLOOR, FORT STANWIX HOTEL

2-2.55 p. m.

Prophylaxis of Puerperal Sepsis (30 minutes).

HAROLD, A. MILLER, Pittsburgh, and MAURICE E. HODGDON, Pittsburgh.

OUTLINE. The past decade has been marked by increasing hospital facilities which are now appreciated and used in an increasing degree. The surgical technic of delivery shows definite improvement and the progress of labor is now largely determined by abdominal examination. Vaginal examinations in both home and hospital deliveries are decreasing in number, and are made with increasing care, and only when a rectal examination cannot be relied upon to furnish the desired information. With the application of the above sound principles of obstetric surgery we still have a degree of sepsis which is inconsistent with a normal physiologic process, and for an explanation of which we must look to bacterial flora of the birth canal of the individual. Routine examination of cervix in primiparæ and multiparæ shows erosion in many of the former, and 70 per cent of the latter. Direct cultures made from these cervices show some strain of streptococcus in 10 per cent of cases, and 4 per cent of these are hemolytic. During even normal delivery cervix is subjected to bruising, stretching, and lacerations in a varying degree, and is not this trauma enough to produce a site of infection? When the parturient woman is seen in early pregnancy the milder erosions, which also contain their percentage of the streptococcus, may be healed before the expected time of delivery. In 25 years of private practice and a large clinical experience, we have never seen cervical malignancy occur if at a previous examination we had noted a cervix entirely free from erosion.

Undulant Fever in Pennsylvania (15 minutes).

FRANK E. COUGHLIN, Harrisburg.

OUTLINE. Discussion of clinical and epidemiologic findings in a survey of over 65 cases which have occurred in Pennsylvania, since the discovery of the first case in Lancaster County in the summer of 1927. These cases are scattered throughout the state, cases having occurred in 35 counties. The majority have used raw milk from herds known to be infected with contagious abortion. A few have been due to contact with infected animals.

3-3.55 p. m.

The Present Status of Thoracic Surgery (Lantern Demonstration) (55 minutes).

JOHN ALEXANDER, Ann Arbor, Mich. (guest).

4-4.55 p. m.

Surgery and Diabetes (Lantern Demonstration) (30 minutes).

JOSEPH T. BEARDWOOD, JR., Philadelphia, and FREDERICK A. BOTHE, Philadelphia.

OUTLINE. Growing importance of diabetic surgery and factors tending to increase this. List of surgical conditions in this series from points of view of diabetes of pre- and post-insulin period. Previous treatment. Gangrene and arteriosclerosis. Medical treatment: routine cases, cases in coma, and emergency cases. Incidence of surgery in diabetes. Types of surgical operations upon diabetics: preventable and non-preventable. Factors leading to favorable surgical results. Infections in the surgical diabetic: carbuncle, gangrene, cellulitis, and abscesses. Surgical treatment. Analysis of our cases.

Is the Inauguration of the Teaching of Clinical Medicine in a General Hospital Possible? (15 minutes).

JOSEPH C. DOANE, Philadelphia.

OUTLINE. Inauguration of clinical teaching in the Jewish Hospital, Philadelphia. Reaction of patients who have never been used for teaching and the psychologic effect on morale of institution as result of having students visit it. Type of material available and use made of it described. General effect of teaching in hospitals, elevation of postmortem percentages, improvement of technic, and its bearing on the occupancy of wards outlined. No difficulties are thought to exist in general hospitals which would make impossible the inauguration of clinical teaching therein. Particularly is this true if the institution is somewhere near a medical school. The paper will tend to show that patients respond well to being used for teaching, that the morale of the hospital is improved thereby, and that the staff, both visiting and intern, welcome inauguration of such a policy.

SECTION ON MEDICINE

AUDITORIUM, JOSEPH JOHNS SCHOOL, MARKET STREET

OFFICERS OF SECTION

Chairman—CHARLES C. WOLFERTH, 256 S. Twenty-first St., Philadelphia.

Secretary—T. PALMER TREDWAY, Box 463, Erie.

Executive Committee—ELLIOT B. EDIE, Citizens Title and Trust Bldg., Uniontown; JESSE L. LENKER, Harrisburg; WILLIAM W. G. MACLACHLAN, Pittsburgh.

Stenographer—MRS. IRENE HILTON SNYDER, 1641 Marshall Field Annex, 25 E. Washington St., Chicago, Ill.

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Tuesday, October 7, 2 p. m.

2-2.55 p. m. Gastro-Intestinal Symposium

An Evaluation of the Various Methods of Gastric Analysis, with Special Reference to the Histamine Test (15 minutes).

GEORGE D. GAMMON, Philadelphia (by invitation).

OUTLINE. Administration of histamine to stimulate flow of gastric secretion permits collection of pure juice for analysis. Curves of acidity and volume of secretion differ from those obtained by use of the juice by the test substance being eliminated. A series of gastro-intestinal cases routinely subjected to the test has been analyzed for the degree of acid production and volume of secretion. Comparison of results with figures obtained by test meal.

Diagnosis, Management, and End-Results in Carcinoma of the Stomach (15 minutes).

Samuel T. Nicholson, Jr., Pottstown.

Outline. Data on 168 hospital-studied cases of carcinoma of stomach; 121 primary carcinoma of stomach; 41 carcinoma of stomach preceded by gastric ulcer symptoms. History condensed as follows: Sex, age, duration of symptoms, complaint, pain, and complete history of nausea, vomiting, loss of weight, laboratory study, including blood, gastric analysis, stools, x-ray findings, findings at operation, and findings at autopsy.

The Precursors of Cancer of the Stomach (15 minutes).

T. Grier Miller, Philadelphia.

Outline. Consideration of various gastric lesions that predispose to development of gastric carcinoma with special reference to gastritis, ulcer, and benign polyps. Significance of focal infection, particularly oral sepsis, and of dietary errors in the etiology. Analysis of a series of cancer cases from these points of view.

Discussion opened by John Day Garvin, Pittsburgh.

3-3.55 p. m. Significance of Personality Make-up in Medicine

The Thyroid in Relation to Personality and to Associated Medical Problems (15 minutes).

Cornelius C. Wholey, Pittsburgh.

Outline. General personality considerations. Personality types, a practical medical issue. Rôle of the endocrines, especially the thyroid, in personality make-up. Distinctiveness of thyroid characteristics sufficient to constitute a personality type.

The Rôle of Personality in the Determination of Types of Functional Psychoses (15 minutes).

Howard K. Petry, Warren.

Outline. Functional psychoses in their characteristics are exaggeration of definite personality types. These personality types also accompanied by different physical make-ups. The psychiatrist sees only the end results of these personality types. Medical practitioners can make a contribution to mental health by early recognition of pre-psychotic personalities.

Sensory and Motor Defects and Deprivations of Childhood Which Influence Personality Development (15 minutes).

Gordon F. Willey, Harrisburg.

Outline. Mental handicap under which a left-handed child labors, particularly in school, when obliged to develop right-hand writing, an illustration of the general group of motor defects and disabilities which influence personality development in childhood. Examples of certain other motor factors influencing personality. The hard of hearing child as distinguished from the deafened child, and the handicap under which he works, particularly in school, as an example of sensory deprivations and defects influencing personality. Other examples of sensory defects in childhood which are reflected in conduct and personality.

Discussion opened by Charles H. Frazier, Philadelphia.

4-4.55 p. m.

Chronic Arthritis.

Loring T. Swain, Boston, Mass. (guest).

Outline. Etiology; pathology; particularly stressing treatment for the different types; emphasizing prevention of deformity; and stressing main treatments which have been most prolific of success.

Wednesday, October 8, 2 p. m.

Joint Meeting of Section on Medicine and Section on Urology

2-5 p. m. Symposium on Tuberculosis of the Genito-Urinary Tract

The Pathogenesis of Urogenital Tuberculosis (15 minutes).

Herbert Fox, Philadelphia.

Outline. A consideration of factors which favor development of tuberculosis of urogenital organs.

Recent Clinical Data on Tuberculosis of the Urogenital Tract (30 minutes).

William F. Braasch, Rochester, Minn. (guest, Section on Urology).

Outline. Possibility of spontaneous evidence of same. Problems in determining whether infection is unilateral or bilateral. Difficulties of interpretation of findings in guinea pig inoculations. Results of cultures. Importance of medical, preoperative and postoperative treatment. Nonsurgical treatment of tuberculous epididymitis. Contra indications to operation.

The Medical Aspects of Renal Tuberculosis (30 minutes).

Henry R. M. Landis, Philadelphia, and Jacob W. Cutler, Philadelphia.

Outline. Lack of knowledge of early manifestations of renal tuberculosis. Uncertainties as to its presence even with modern methods of examination. Presence usually recognized when the disease has been fully established and has reached an advanced form. Study of the literature for the past few years.

The Surgical Treatment of Renal Tuberculosis and Prognosis (30 minutes).

Leon Herman, Philadelphia, and Lloyd B. Greene, Philadelphia.

Outline. What does medical treatment offer? Do cases ever get well spontaneously? What happens to the well-developed, untreated case? The operative technic and its complications. The postoperative mortality and morbidity.

Tuberculosis of the Genital Organs (20 minutes).

Isaac L. Ohlman, Pittsburgh.

Outline. Careful examination of the external genitalia will often reveal pathology of the epididymis. Preceding venereal history of importance. Careful palpation of prostate and vesicles necessary in diagnosis. Treatment and prognosis.

Discussion opened by Truman G. Schnabel, Philadelphia; and James C. Burt, Pittsburgh.

Thursday, October 9, 9 a. m.

9-9.55 a. m. Case Reports

(Five minutes each)

1. Symptomless, Extensive Carcinoma in the Abdominal Cavity with Fatal Hemorrhage.

   Francis J. Dever, Bethlehem.

2. A Case of Rabies.

   Herman A. Heise, Uniontown.

3. Acute Pneumococcic Peritonitis with Acute Empyema—Left, Metastatic.

   Stanley D. Conklin, Sayre.

4. Seven Cases of Pernicious Anemia.

   J. Newton Hunsberger, Norristown.

5. Pulmonary Distomiasis.

   Joseph A. Stackhouse, Erie.

6. Hepatomegaly.

   Walter M. Bortz, Greensburg.

7. Pericardial Calculosa.

   Jesse L. Lenker, Harrisburg.

10-10.55 a. m. Symposium on Thyroid Disease

Thyroid in the Retrospect (15 minutes).

Ford Eastman, Erie.

Outline. Introductory. Knowledge of and ideas about the thyroid in ancient cultures—Chinese, Hindu, Greek. Anatomical studies in physiological theories of the gland and its function before the present era of scientific medicine. Golden era of fruitful study during past generation. Present knowledge and theories resulting therefrom. A forward look.

The Diagnosis of Hyperthyroidism (15 minutes).

Roy Ross Snowden, Pittsburgh.

Outline. Diagnosis of hyperthyroidism depends on presence of certain well recognized signs, together with increase in the

basal metabolic rate. Symptoms described by patients are of very little diagnostic significance; physical signs, on the other hand, are definite and, in the great majority of cases of true hyperthyroidism, are conclusive. Three most constant and typical signs are tachycardia, tremor and loss of weight. Most reliable of these is tachycardia. Presence of all three signs practically conclusive for diagnosis of hyperthyroidism. Difficulties of diagnosis are found in borderline cases, those presenting atypical syndromes, or those seen during a period of remission.

The Therapeutic Use of Thyroid Derivatives (15 minutes).

EDWARD ROSE, Philadelphia.

OUTLINE. Introduction. Development of various thyroid preparations. Place occupied by thyroid substance and thyroxin. Nature and physiologic action of these substances. Manifestations of overdosage. Treatment of cretinism. Importance of early recognition. Trial method of dosage and occasional necessity of shifting from one preparation to the other. Symptoms of overdosage. Duration of treatment, and accessory measures. Prognosis and end results. Treatment of myxedema. Importance of diagnosis. Method of dosage and how correct dosage is determined. Evidence of overdosage. Duration of treatment. Prognosis and end results. Recognition and treatment of mild hypofunction of the thyroid. The frequently unrecognized symptoms of such cases. Importance of basal metabolism tests. Dosage. Dissimilarity of response of various symptoms to treatment. Association of goitre with hypofunction of thyroid and response of such goiters to treatment with a combination of thyroid derivatives and iodin. Treatment of certain types of nephrosis. Effect in relieving edema, reducing cholesterol content of blood, etc. Comparative rarity of the type of nephrosis that will respond to such treatment. Treatment of certain types of edema. Importance of ruling out all other known causes of edema before resorting to this treatment. Occasional association with lowered basal metabolism and possibility that such edema may be manifestation of mild hypothyroidism. Treatment of certain cardiac disorders. Use of thyroid derivatives in small doses as general tonics.

11-11.55 a. m.

Clinical Studies on Pain in Medical and Surgical Conditions (55 minutes).

EMANUEL LIBMAN, New York City (guest).

12 noon-12.55 p. m. Cardiovascular Hour

Sudden Death in Coronary Disease (Lantern Demonstration).

WILLIAM D. STROUD, Philadelphia.

OUTLINE. Earliest symptoms and physical signs suggesting possible coronary artery disease, with special reference to familial tendency to degenerative cardiovascular changes. Discussion of probable factors producing coronary changes, with suggestions as to possible prevention. Review of relationship between angina pectoris and sudden death from coronary occlusion. Brief résumé of several typical cases.

Clinical Evaluation of Circulatory Efficiency.

ARTHUR B. THOMAS, Pittsburgh.

OUTLINE. Maximum circulatory efficiency exists when optimum velocity and pressure of blood are maintained in heart, arteries, capillaries and veins, with minimum expenditure of energy by these structures. Since there are no clinical methods by which one may measure directly the relationship of energy utilized to effect produced, evaluation of circulatory efficiency must be based upon observed variations in cardiovascular function. Nature and extent of these variations considered in relation to: Circulatory sufficiency, circulatory insufficiency, and circulatory failure.

Diagnosis of Early Circulatory Insufficiency.

HORACE B. ANDERSON, Johnstown.

OUTLINE. Diagnosis of early circulatory insufficiency will involve proper evaluation of information derived from the following sources: Mental picture of normal physiology of circulation. A carefully taken history: Special reference to history of rheumatic fever, chorea, and severe single infections or repeated small infections and arteriosclerosis. Careful eliciting of symptoms referable to circulatory disturbances in gastro-intestinal, respiratory, genito-urinary and nervous systems. Family history. Carefully made physical examination. Functional tests, radiograms, pyelograms, and electrocardiograms carefully made and interpreted. Experience and art of diagnosis.

Discussion opened by CHARLES H. MINER, Wilkes-Barre.

SECTION ON SURGERY

BALLROOM, SEVENTH FLOOR, FORT STANWIX HOTEL

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Chairman—DAMON B. PFEIFFER, 1822 Pine St., Philadelphia.

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Stenographer—MISS MARY E. REIK, Southgate Apts., N-2, Alger Court, Bronxville, N. Y.

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Tuesday, October 7, 2 p. m.

2-2.55 p. m. Symposium on Fractures

On the Treatment of Compound Fractures by the Orr Method (15 minutes).

CALVIN M. SMYTH, JR., Philadelphia, *Associate.*

OUTLINE. Compound fractures are a source of great disability and economic loss. Under the older methods of treatment good results were obtained, but usually only after long periods of treatments, punctuated by frequent and painful dressings. Infection was the rule rather than the exception. The Orr method is not in itself new but it applies the well established principles of sterilization and immobilization to the treatment of compound fractures and to a lesser degree—osteomyelitis. The method consists essentially in thorough débridement, adequate reduction of fracture with direct fixation, if necessary, packing with vaselinized gauze and immobilization in circular plaster cast, and no dressing until packing is removed at end of four to six weeks. Not all cases suitable for the method, and certain complications must be guarded against and recognized promptly if they arise. Reports of several cases.

The Nonoperative Treatment of Fractures of the Long Bones in Children and Adolescents (Lantern Demonstration) (15 minutes).

VOIGHT MOONEY, Pittsburgh, *Associate.*

OUTLINE. Brief discussion of practical side of treatment of fractures of shafts of femur, tibia, humerus, and radius. Fractures of shaft of the femur in those under 6 years do well with use of Thomas splint. After 3 weeks of treatment with ventral suspension or Thomas splint, a routine plaster-of-Paris hip spica is applied with knee flexed, and patient is allowed to go about on crutches. Patient walks without crutches and there is weight bearing, 2½ months after initial injury. Simple or compound fractures of shaft of tibia treated by applying plaster cast in two sections with knee flexed. Traction being made on the foot, a cuff of plaster is applied at site of fracture. Fractures of shaft of humerus treated by using plaster-of-Paris shoulder spica, the arm being held in abduction. Fractures of humerus near elbow joint best dressed in hyperflexed position. Dorsal and ventral wood splints, cut to size, used in treatment of fractures of both bones of forearm. Fluoroscope a valuable aid in reduction of fractures of these long bones in either upper or lower limbs. After treating many fractures in children one is impressed with the known fact of these guiding principles, namely, bones in children are not greatly separated from soft tissue, and perfect anatomical reduction is not essential for perfect functional recovery.

The Choice of Methods in the Nonoperative Treatment of Fractures of the Femur (Lantern Demonstration) (15 minutes).

JOHN H. JOPSON, Philadelphia, *Principal.*

OUTLINE. Evaluation of various methods of treatment of fractures of femur which do not require open operation. Lack of agreement as to relative value of traction methods in common use. Necessity of prompt choice of method indicated in

each variety of fractures. "Setting" of fractures vs. extension and pulley traction. Skeletal traction, its advantages, dangers, and indications. Russell method, with special reference to per-trochanteric fractures.

Discussion opened by Evan W. Meredith, Pittsburgh.

3-3.55 p. m. Symposium on Ovarian Cysts

The Diagnosis and Treatment of Benign Cysts of the Ovary (15 minutes).

Sidney A. Chalfant, Pittsburgh, *Associate.*

Outline. No satisfactory classification of tumors of the ovary. Follicular cysts are not new growths and rarely require treatment. True cysts cause no symptoms until some complication occurs, or they reach large size. Differential diagnosis. Treatment is removal as soon as discovered on account of danger of complications or malignant change.

The Diagnosis and Treatment of Endometrial Cysts of the Ovary (15 minutes).

Floyd E. Keene, Philadelphia, *Associate.*

Outline. Life history and pathology discussed in so far as they bear upon symptoms and treatment. Summary of clinical manifestations based upon analysis of 117 cases. Radical surgery may be required, but results warrant adoption of conservative measures whenever possible.

The Diagnosis and Treatment of Malignant Ovarian Tumors (10 minutes).

Brooke M. Anspach, Philadelphia, *Principal,* and John B. Montgomery, Philadelphia.

Outline. Incidence of primary and secondary ovarian cancer. Difficulty of diagnosis at an early stage. Suggestive symptoms before, during, and after the menopause. Prognosis following operation. Value of subsequent x-ray treatment.

Discussion opened by William L. Estes, Jr., Bethlehem; Harold L. Foss, Danville; and Harvey F. Smith, Harrisburg.

4-4.55 p. m.

The Problems of Cancer of the Stomach: Education, Operative Technic, Therapy, Ultimate Result, and Research.

Joseph Colt Bloodgood, Baltimore, Md. (guest).

Wednesday, October 8, 2 p. m.

Joint Meeting of Section on Surgery and Section on Pediatrics

2-2.55 p. m. Symposium on Osteomyelitis

Diagnosis of Acute Osteomyelitis in Children (20 minutes).

Frederick R. Bausch, Allentown, *Associate.*

Outline. Bones most frequently affected. Etiology. Course of disease. Prognosis. Negative value of x-ray. Method of treatment.

The Treatment of Acute Osteomyelitis (10 minutes).

Grover C. Weil, Pittsburgh, *Associate.*

Outline. Importance of early recognition. Value of avoiding delay in establishing early operative measures by differentiating other acute infections associated with severe acute constitutional febrile states. Value of early surgical drainage. Avoidance of massive destruction by early and complete drainage. Early blood culture. Local bacteriologic study. Technic of early operative procedures. Postoperative attention to local wound and constitutional treatment.

The Treatment of Chronic Osteomyelitis (Lantern Demonstration) (10 minutes).

John H. Galbraith, Altoona, *Principal.*

Outline. Operable and inoperable. Various so-called methods: poultices, pastes, dyes, Carrel-Dakin, Chutro, Orr's method, maggots, etc. All dependent on proper surgical procedure. Factors on which success depends.

Discussion opened by George J. Feldstein, Pittsburgh.

3-3.55 p. m. Symposium on Empyema

Difficulties in Diagnosis of Empyema (15 minutes).

Arthur L. Page, Harrisburg, *Associate.*

Outline. Frequency and danger of empyema in children. Three periods of evolution of empyema in children. Variations between cases of empyema caused by type of offending organism. Classical signs of empyema as they apply to cases in childhood. Obscure physical signs and other pathologic conditions which give difficulty in differential diagnosis. Dangers of tardy recognition and tendency toward increased chronicity.

Roentgen Diagnosis of Empyema (10 minutes).

George W. Grier, Pittsburgh, *Principal.*

Outline. Diffuse empyema; localized empyema; differentiation from pneumonia, lung abscess, atelectasis—either local or general, new growth, mediastinal tumor, foreign body in the lung. Occasional necessity of subsequent examinations to follow the progress of the case in order to make correct diagnosis. Recognition of concurrent pathology.

Surgical Treatment of Empyema (5 minutes).

Harry R. Decker, Pittsburgh, *Associate.*

Outline. Treatment of empyema thoracis is surgical whether pyogenic or tuberculous; acute or chronic. There should be no exclusive operative method. Aspiration, closed drainage, costectomy, and thoracoplasty have their indications and place. Proper treatment of acute empyema will minimize the need for treating chronic cases. Discussion of operative methods and their indications. Factors in mortality. Results.

Discussion opened by Aaron Capper, Philadelphia; Edwin E. Graham, Philadelphia, and Harry M. Stewart, Johnstown.

4-4.55 p. m.

Acute Surgical Abdomen in Children from Pediatric Standpoint.

William E. Ladd, Boston, Mass. (guest).

Thursday, October 9, 9 a. m.

9-9.55 a. m. Case Reports

(Five minutes each)

1. Interstitial Pregnancy with Rupture of the Uterus. David B. Ludwig, Pittsburgh.
2. Acute Streptococcic Hemolytic Gangrene. Francis S. Mainzer, Clearfield.
3. Spinal Anesthesia in Dislocated Hip. George W. Reese, Shamokin.
4. Ruptured Ectopic Pregnancy in which Life was Saved by Autotransfusion. Marshall C. Rumbaugh, Kingston.
5. Transplantation of the Head of the Fibula to the Humerus. Moses Behrend, Philadelphia.
6. Lipomas of the Small Intestine. Bernard J. McCloskey, Johnstown.
7. An Interesting Case of Bone Sarcoma. Edgar Shifferstine, Coaldale.
8. Adenocarcinoma of the Uterus with Associated Sarcoma of the Ovary. Russell T. Wall, Scranton.

General discussion (15 minutes).

10-10.55 a. m. Symposium on Sympathectomy

Anatomico-Physiological Consideration of Sympathectomy and Ramisection (20 minutes).

J. Parsons Schaeffer, Philadelphia, *Principal.*

Outline. Important structural and relational aspects of autonomic nervous system. Autonomic nervous system considered functional rather than morphologic division of the nervous system. Present status of our knowledge of anatomic arrangements and relationships of nerves supplying peripheral arteries. Sympathetic and parasympathetic; innervation of skeletal muscles; anatomic status; data concerning functional significance.

Surgical Application of Sympathectomy (20 minutes).

FRANCIS C. GRANT, Philadelphia, *Associate.*

OUTLINE. The work of Royle and Hunter, Adson and Brown, Davis and Kanavel, shows conclusively that to relieve vasomotor spastic phenomena in the extremities it is necessary to section the ganglionated sympathetic chain rather than perform peripheral per-arterial sympathectomies. Types of conditions: Raynaud's disease, Buerger's disease, scleroderma, and causalgias of various kinds that seem to be amenable to this treatment, and results obtained.

Discussion opened by ISIDOR S. RAVDIN, Philadelphia; and RICHARD J. BEHAN, Pittsburgh.

11-11.55 a. m. Symposium on the Vascular System

Injection Method for the Cure of Varicose Veins.

GEORGE W. HAWK, Sayre, *Principal.*

OUTLINE. Brief history of injection method with etiology, incidence, and varieties of varices. Indications and contra-indications for injection treatment. Complications and dangers. Solutions used. Technic. Tests of venous circulation. Pathology. Personal experiences. Conclusions.

Practical Points Concerning Blood Transfusion.

HAROLD W. JONES, Philadelphia, *Associate.*

OUTLINE. Availability of several methods of transfusion, direct and indirect. Preparation of donor for transfusion. Cross matching and blood typing necessities in preparing for transfusion. Are blood types of medicolegal importance? When should transfusion not be given?

Intravenous Therapy as an Aid to Surgical Treatment.

ELMER HESS, Erie.

OUTLINE. Introductory remarks. Drugs used—dosage, indications and contra-indications, methods of administration, and results that should be obtained; with particular reference to pre- and post-operative treatment. As the indications for intravenous therapy are practically the same in general surgery as in urological surgery, the writer has drawn from his own experiences the data and information herewith submitted.

Discussion opened by WILLIAM P. BELK, Bryn Mawr, and EDWARD J. MCCAGUE, Pittsburgh.

12 noon-12.55 p. m.

The Tragedy of Appendicitis.

HUBERT A. ROYSTER, Raleigh, N. C. (guest).

OUTLINE. No need to enter upon a detailed account of the etiology, pathology, diagnosis, symptomatology, and treatment of appendicitis; but great need to remind the profession that delay is still deadly sin, that lack of moral courage is the stumbling-block; that once appendicitis, always appendicitis, until the little assassin is removed. Instruction of laity and renewed interest of medical men imperatively demanded. Discussion of mortality statistics of little avail unless each physician assumes individual responsibility. Whenever gangrene or rupture of appendix occurs, some one has blundered. The real tragedy of appendicitis is that any one should die of the disease.

SECTION ON EYE, EAR, NOSE AND THROAT DISEASES

ROOM A, Y. M. C. A. BUILDING, VINE AND MARKET STREETS

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Tuesday, October 7, 2 p.m.

A Discussion of the Elements Underlying Progressive Axial Myopia (30 minutes).

HUNTER H. TURNER, Pittsburgh.

Some Points in Connection with Cataract Extraction (55 minutes).

ARNOLD KNAPP, New York City (guest).

The Removal of Nonmagnetic Foreign Bodies from the Vitreous (20 minutes).

GEORGE H. CROSS, Chester.

OUTLINE. Copper and lead, both so destructive to sight and heretofore requiring enucleation when located within the eyeball, can be removed and the eye saved, if they can be seen with fluoroscope. Double plane fluoroscope and its skilled operator in conjunction with ophthalmic surgeon are essential factors. Since this method was devised, 7 patients have been successfully operated upon, metal fragment removed, and in no case has eyeball been lost. Other nonmagnetic foreign bodies if sufficiently large to cast a shadow can be removed by same method. Round lead shot varying in size from No. 12 to No. 6 removed by this method, using special wire loop shot forceps.

Discussion opened by WILLIS F. MANGES, Philadelphia; and WARREN S. REESE, Philadelphia.

The Value of Foreign Protein Therapy in the Treatment of Ocular Pathologies.

CHARLES E. G. SHANNON, Philadelphia.

OUTLINE. Brief summary of development of use of protein and nonspecific protein substances for prophylactic and curative purposes. Specific therapy, as applied to ocular therapeutics, includes employment of tuberculin, bacterial vaccines, and their derivatives; uveal pigment, and lens proteins. These phases discussed; case histories. Nonspecific therapy now definitely established as effective means in treatment of diseases of the eye. Nonspecific proteins most often used in ophthalmology are diphtheria antitoxin, milk, and typhoid vaccines. Relative value of these substances in treatment of various diseases of the eye.

Discussion opened by WILLIAM J. FETTER, Pittsburgh.

Case Reports

1. Cyst of Iris Following Perforating Injury. Patient presented (10 minutes).

   OLIN G. A. BARKER, Johnstown.

2. Motion Picture Demonstration of Cataract Extraction (15 minutes).

   FRANK C. PARKER, Norristown.

3. A Case of Sarcoma of the Choroid (10 minutes).

   WARREN S. REESE, Philadelphia.

Wednesday, October 8, 2 p.m.

Mortality Factors in Mastoiditis (Lantern Demonstration) (40 minutes).

NELSON S. WEINBERGER, Sayre, *Principal.*
HENRY D. RENTSCHLER, Sayre, *Associate.*

OUTLINE. General mortality and mortality of complications reviewed. Factors in general practitioner's and otologist's management of the disease tending to reduce lethal risk to the minimum.

Discussion opened by CURTIS C. EVES, Philadelphia; and JOHN J. SULLIVAN, Scranton.

Prognosis in Convalescence Following Simple Mastoidectomy (40 minutes).

GEORGE M. COATES, Philadelphia, *Principal.*
ABRAM H. PERSKY, Philadelphia, *Associate.*
MATTHEW S. ERSNER, Philadelphia, *Associate.*

Outline. Factors associated with acute mastoid disease; weighing their relative importance both on prognosis and convalescent period. Remarks upon associated complications based on a study of 644 cases.

Discussion opened by John F. Culp, Harrisburg.

Eustachian Bouginage—A New Technic in Severe Obstructions (10 minutes).

Henry S. Wieder, Philadelphia.

Outline. Brief history of Eustachian bouginage with description of various types of instruments. Indications. Author's conclusions. Description of new technic to be used in otherwise impassable strictures. Results and conclusions.

Interstitial Emphysema Following Catheterization of Eustachian Tube (20 minutes).

George F. Gracey, Harrisburg.

Outline. Necessity for frequent use of Eustachian catheter and bougie. Methods of inflation, including forced inflation by pressure machines. Danger of producing rents in mucosa by catheter or bougie through which air may be forced into interstitial tissues. Symptoms of interstitial emphysema. Anatomical considerations. Continuance and increase of emphysema, after once established, and causes. Short review of cases found in the literature. Three cases from the author's experience. Possibility of edema of larynx, also sepsis in tissues. Possibility of death. Treatment of condition. Absolute condemnation of any mechanical means other than hand inflation during catheterization.

Discussion opened by Charles E. Hays, Johnstown; and John B. McMurray, Washington.

Peroral Endoscopy in a General Hospital (20 minutes).

Lewis T. Buckman, Wilkes-Barre.

Outline. Introduction. Results of survey of 118 general hospitals throughout the state. Statistics. Trained bronchoscopist should be attached to staff of every general hospital. Reasons advanced for this conclusion. These statements based upon the experience of a general hospital of 415 beds. Introduction of service with number and types of cases treated. Statistics.

Discussion opened by Frederick J. Bishop, Scranton; and Francis W. Davison, Danville.

Case Report

Foreign Body in the Pharynx (10 minutes).

Francis S. Mainzer, Clearfield.

Thursday, October 9, 9 a. m.

Personal and Practical Experiences with Neoplasms about the Head and Neck, with Special Reference to the Ear, Nose and Throat (Lantern Demonstration) (55 minutes).

Joseph C. Beck, Chicago (guest).

The Importance of a Close Coöperation between the Oculist and the Otorhinolaryngologist (20 minutes).

George W. Schlindwein, Erie.

Outline. Our present knowledge of interrelation between diseases of the eye and conditions of the nose and throat. Post-graduate teaching in United States and Europe and closer attention to this subject in medical schools has served to emphasize this relation. Careful and exhaustive work done by the late Dr. Greenfield Sluder. Consultation and diagnostic examination of nose and throat with report of conditions found rendered to ophthalmologist an indication for treatment. Conditions in which the help of the otolaryngologist may be expected: Retrobulbar neuritis, uveitis, iritis, keratitis, keratoiritis, scleritis, and episcleritis. Phlyctenular disease, formerly very common, now becoming quite rare. The observation that extensive suppurative disease of the accessory sinuses involves the orbit rather than the globe itself, and when definite disease of the eyeball is found, very marked changes in the nose are absent. Rôle of nasal ganglion in causation of unilateral headache and neuralgias. Conclusions: In all observations the aid of the otolaryngologist should be sought in making definite diagnosis as to etiology of underlying condition. Many cases should have the coöperative treatment of the specialist, but in a great number of cases, results are not so successful as one would wish, and possibly the present opinion is that conservatism rather than radical measures will give us better results.

Discussion opened by Edward B. Heckel, Pittsburgh.

Principles Underlying Proper Treatment of Chronic Diseases of the Nasal Accessory Sinuses (Lantern Demonstration) (25 minutes).

George G. Kneedler, Pittsburgh.

Outline. Anatomical relation of the sinuses. Extraneous factors. Abnormalities: Traumatic, deformities, pathologic conditions. Functions: Secretions, air passages, cells. Conservative treatment: Surgical, medical.

Discussion opened by John B. McMurray, Washington.

Apropos to the Systemic Dissemination of Certain Human Rhino-Pharyngeal Infections (15 minutes). de Wayne G. Richey, Pittsburgh.

Outline. After outlining fundamental principles of infection and resistance, the rôle of certain infectious processes of the nose, paranasal sinuses, pharynx, and tonsils to various systemic inflammatory reactions is discussed. Recent relevant contributions reviewed especially in the light of their practical application to clinical phases of the subject.

Discussion opened by Philip Harold Decker, Williamsport.

Case Report

1. Acute Suppurative Mastoiditis with Complications (10 minutes).

Clarence M. Harris, Johnstown.

SECTION ON PEDIATRICS

ROOM A, AMERICAN LEGION BUILDING, 114 MAIN STREET

Officers of Section

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Tuesday, October 7, 1 p. m.

Luncheon (Guests of Memorial Hospital).

2-4 p. m. Clinic at Memorial Hospital

William F. Mayer, Johnstown,
Theodore O. Elterich, Pittsburgh.

4-4.55 p. m.

Sinusitis in Children (Lantern Demonstration) (15 minutes).

Warren B. Davis, Philadelphia.

Outline. Developmental and anatomic conideration of paranasal sinuses in infants and young children. Predisposing causes of sinus infections. Prophylactic measures. Methods of diagnosis. General plan of treatment.

Success or Failure of Goiter Prevention in Schools (15 minutes).

J. BRUCE MCCREARY, Harrisburg.

OUTLINE. Existence of goiter in school children. Goiter belts. Racial predisposition. Group testing. Proper medication for goiter prevention. Eradication by prenatal treatment.

Vulvovaginitis in Children (15 minutes).

ALFRED S. MCELROY, Pittsburgh.

OUTLINE. Incidence and prevalence. Importance as social problem. History and treatment, past and present. Satisfactory method and plan of treatment outlined.

Open discussion (10 minutes).

Wednesday, October 8, 2 p. m.

JOINT MEETING OF SECTIONS ON SURGERY AND PEDIATRICS IN BALLROOM, SEVENTH FLOOR, FORT STANWIX HOTEL. FOR PROGRAM SEE SECTION ON SURGERY, PAGE 786.

Thursday, October 9, 9 a. m.

9-9.55 a. m. Symposium on Diabetes Mellitus

Treatment of Diabetes Mellitus in Presence of Other Acute Febrile Diseases (10 minutes).

LOUIS H. MAYER, Johnstown.

OUTLINE. Nature, frequency, and diversity of the problems encountered in infancy and childhood. Changes in metabolism occurring in the presence of fever and infection. Management, hygienic, dietary, with or without insulin. Conclusions.

Abolishing Coma in Diabetes and its Treatment if Present (10 minutes). FRED E. ROSS, Erie.

OUTLINE. Definition of various kinds of acidosis. Cause and prevention of its occurrence. Review of some more recent methods of treatment of this condition.

Management of Ambulant Diabetic Necessity for Diabetic Centers (15 minutes).

JOHN D. PAUL, Philadelphia.

OUTLINE. Success of all diabetic treatment depends on coöperation of patient. Coöperation increases directly with patient's knowledge of the disease. Proper education is only possible in a well organized center.

Proper Use of Insulin and Diet in Juvenile Diabetes (15 minutes).

HARVEY O. ROHRBACH, Bethlehem.

OUTLINE. To avoid ketosis, diet must contain right proportion of carbohydrates to fat. Sufficient food elements are essential to avoid malnutrition and to produce normal growth. Hospitalization necessary for training and education of diabetic child. Normal diet plus insulin renders urine sugar free. Sugar percentage of blood determines insulin dosage. Urine also indication for size of dose. In addition to three regular meals two midmeal lunches help to control troublesome cases. When blood sugar determination necessary. Method used for urine test. Conclusions.

Open discussion.

10-10.55 a. m. Case Reports

(Five minutes each)

1. Celiac Disease Treated with Unusual Diet.
DANIEL E. BERNEY, Scranton.
2. Spasmophilic Convulsions Followed by Spastic Paraplegia.
CHARLES HAYDEN PHILLIPS, Wilkes-Barre.
3. Suppurative Appendicitis with Intestinal Obstruction in a Child Four Months Old.
FRANCIS S. MAINZER, Clearfield.
4. Encephalitis as Sequela to Measles.
J. CLINTON ATWELL, Butler.
5. Tuberculoma of Pons Cerebri.
GEORGE J. FELDSTEIN, Pittsburgh.
6. Diabetes Mellitus in Infant Eleven Months Old.
ELMER G. SHELLEY, North East.
7. Mediastinal Lymphosarcoma (with autopsy).
WILLIAM F. MAYER, Johnstown.
8. Acute Splenitis, Acute Nephritis and Intestinal Obstruction in a Ten Months' Old Infant.
RICHARD R. SPAHR, Mechanicsburg.

11-11.55 a. m. Symposium on Nutrition

Is There an Ideal Infant Food? (15 minutes).

ALVIN E. SIEGEL, Philadelphia.

OUTLINE. Mother's milk natural food for human infant, often ideal but may be far from ideal under certain conditions. Artificial foods—evaporated, condensed, powdered and synthetic milks. Milk modifiers, various forms of sugars. Animal milks—goat's, cow's, etc. The value of caloric and percentage estimations. Milk preparations, lactic acid, protein, boiled butter mixtures, etc. Other foods, soy bean, malt soup, etc. The slogan for success in infant feeding, adapt food to the baby and not the baby to the food.

Irradiated Milk as a General Preventive of Rickets (Lantern Demonstration) (12 minutes).

ARTHUR G. DAVIS, Erie.

OUTLINE. Explaining a new source of carbon arc light applied to a continuous film method of irradiating milk, activating cholesterol in the milk sufficiently to prevent or cure rickets without altering taste or otherwise changing the constitution of the milk, except for slight destruction of vitamin A. Also showing bactericidal effect and depicting animal experimental as well as infant and child chemical data.

Roentgen Study of Bone Lesions in Infantile Scurvy (Lantern Demonstration) (15 minutes).

RALPH S. BROMER, Philadelphia.

OUTLINE. Use of roentgen ray now makes possible early diagnosis of infantile scurvy. Pathologic changes as shown on roentgenogram can be divided into four stages: early or subacute; stage in which clinical diagnosis can usually be made without difficulty, but in which no subperiosteal hemorrhages have yet appeared; hemorrhagic; and healing stage. The first most important from standpoint of diagnosis. Evidence of scurvy may persist for 5 or more years after onset of the disease.

Management of Pyloric Obstruction in Infancy with Special Reference to Certain Remedial Agents (15 minutes).

HARRY LOWENBURG, Philadelphia.

OUTLINE. Influence of spasm and hypertrophy in production of symptoms. Spasm thought to be more important, although if true it does not in the individual case always exclude need for operation. Significance of palpable pyloris. Indications for operation. Decision for operation rests with the physician, not the surgeon. The intelligent use of Sauer's formula and its too little appreciated flexibility. Therapeutic action of milk of magnesia. Influence of the thymus. Possible relationship between pyloric obstruction and tetany (spasmophilia). Parahormone. Breast feeding and administration of water. Dangers of atropin. Conclusions.

12 noon-12.55 p. m.

Intraperitoneal Therapy in Infants and Young Children (Lantern Demonstration).

CLIFFORD G. GRULEE, Chicago, Ill. (guest).

SECTION ON DERMATOLOGY AND SYPHILOLOGY

ROOM B, Y. M. C. A. BUILDING, VINE AND MARKET STREETS

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Stenographer—MISS MARGARET I. MALONEY, 25 E. Washington St., Chicago, Ill.

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Tuesday, October 7, 2 p. m.

Differential Diagnosis of Varicella, Variola, and Varioloid. Jay F. Schamberg, Philadelphia.

Differential Diagnosis of Measles, Scarlet Fever and German Measles.

Samuel S. Woody, Philadelphia.

Outline. Symptoms. Peculiarities in development, appearance and progress of the rash. Complications. Blood changes.

Precancerous Dermatoses.

Stanley Crawford, Pittsburgh.

Outline. Malignant degeneration of skin does not always commence with a malignant lesion per se. In many instances is preceded by simple benign process which develops malignancy later. Literally, no exactly precancerous state has been discovered. The benign processes not necessarily precursors of cancer nor conducive to cancerous development. Since 1 to 4 per cent of benign processes develop malignancy, they are considered possible forerunners of carcinoma and therefore placed in a hypothetical category which for convenience and want of a better term are called "precancerous dermatoses."

Treatment of Oral and Skin Cancer.

George M. MacKee, New York City (guest).

Ringworm Fungi. Fred D. Weidman, Philadelphia.

Outline. Scope and limitations of ringworm. Multiplicity of species concerned; their separate place in the toxonomic scheme. Radically different from well-known penicillia, aspergilli, mucors, etc. Their occurrence in nature. Virulence as compared to bacteria. Pathogenesis.

Eruptions of the Negro Child.

Edward F. Corson, Philadelphia.

Outline. Prevalence of negroes in dispensary practice. Clinical and structural differences in the skins of the contrasted races. The exanthemata in blacks. Contagious skin diseases proper, including animal, fungous, and bacterial groups, as seen in the young negro. Toxic and allergic outbreaks, and resistance of the dark integument to external irritants. Pigmentary and follicular appearances. Hereditary syphilis in colored infant.

Wednesday, October 8, 9 a. m.

Half Hour Clinic. John W. Barr, Johnstown.

SECTION ON UROLOGY

ROOM B, Y. M. C. A. BUILDING, VINE AND MARKET STREETS

Officers of Section

Chairman—Benjamin A. Thomas, 1900 Spruce St., Philadelphia.*

Secretary—Thomas C. Stellwagen, Jr., 220 S. Sixteenth St., Philadelphia.

Executive Committee—Peter P. Mayock, Wilkes-Barre; James C. Burt, Pittsburgh; Hiram Loux, Philadelphia.*

Stenographer—Miss Margaret I. Maloney, 25 E. Washington St., Chicago, Ill.

(Note—Essayists will please deposit original copies of their papers with the secretary of the Section when they have finished reading them. The Journal will not accept carbon copies.)

*Deceased.

(Note—The ringing of the bell, announcing the beginning, the division, and the conclusion of each 55-minute period, is beyond the control of any officer of the Section. Ample warning of this fact, with frequent reference to time allotted, has been given all who appear on the program.)

Wednesday, October 8, 2 p. m.

2-5.00 p. m.

Joint Meeting of Sections on Medicine and Urology in Auditorium, Joseph Johns School. For program see Section on Medicine, page 784.

Thursday, October 9, 8.45 a. m.

8.45-9 a. m.

Executive Session.

9-9.55 a. m.

The Pre-Prostatic (15 minutes).

Maurice Muschat, Philadelphia.

Outline. The clinic of the pre-prostatic. Gradual deterioration of the pre-prostatic. Pathologic-physiologic disturbances affecting nervous system, heart, kidneys, etc., in the pre-prostatic period. Residual urine a symptomatic entity. Prostatectomy after acute retention develops—archaic surgery.

Obstruction at the Vesical Neck (Lantern Demonstration) (15 minutes).

Albert E. Bothe, Philadelphia.

Outline. Brief review of histology of normal vesical neck. Tabulation of lesions causing obstruction, with histological sections illustrating more common types. Brief outline of histories and treatment of these cases.

Carcinoma of Bladder (15 minutes).

Robert Y. Grone, Danville.

Outline. Occurrence. Pathology. Diagnosis: especially by means of the cystoscope. Treatment: Conservative; radical.

Discussion opened by William H. Mackinney, Philadelphia (10 minutes).

10-10.55 a. m.

Certain Physiologic Problems Arising from the Forcing of Fluids (15 minutes).

W. Hersey Thomas, Philadelphia.

Outline. Recent work on water metabolism, especially that concerned with fixed base and consequent edema, closely interrelated with clinical aspect of urology. Untoward symptoms of headache, vomiting, stupor, and convulsions intimately associated with disturbances in water metabolism and dependent upon amount of fluid forced upon patients in presence of renal and other eliminating deficiencies. Value of fluid limitation in treatment of so-called uremia frequently encountered in prostatic and other allied conditions.

Acute Hematogenous Infections of the Kidneys (15 minutes).

Burtis M. Hance, Easton.

Outline. Theory. Description. Termination. Etiology. Symptoms. Diagnosis. Case Records.

Renal Vascular Anomalies and Renal Disease (15 minutes). Theodore R. Fetter, Philadelphia.

Outline. Anatomic study of renal vascular anomalies in regard to origin, number, comparative frequency, relationship to ureter, and distribution to kidney. Embryologic consideration. Review of the literature. Importance and significance in renal disease and renal surgery.

Discussion opened by Alexander Randall, Philadelphia (10 minutes).

11-11.55 a. m.

Torsion of the Testicle (15 minutes).

Joseph C. Birdsall, Philadelphia.

Outline. Careful history and physical examination emphasized in suspected cases of torsion. Two types recognized in

the mechanism of torsion: intravaginal and extravaginal. Differential diagnosis from other pathologic lesions of the testicle. Torsion in cryptorchidism.

Chronic Seminal Vesiculitis—Diagnosis and Treatment (15 minutes). STACY M. HANKEY, Pittsburgh.

OUTLINE. General discussion of subject, with special reference to the group of cases seen in office practice. Brief review of anatomy and physiology of seminal vesicle. Hyrdogen ion concentration of secretions, normal and abnormal, pathology of vesicle wall and ampullæ, symptomology varies, depends on pathology of other structures; the diagnosis difficult; treatment.

Nonspecific Prostatitis (15 minutes).
JAMES F. MCCAHEY, Philadelphia.

OUTLINE. Clinical study of incidence of infection of prostate in individuals with no history of gonorrhea. Symptoms. Diagnosis. Treatment.

Discussion opened by STIRLING W. MOORHEAD, Philadelphia (10 minutes).

12 noon-12.55 p. m. Case Reports

(Five minutes each)

1. Double Kidney with Hydronephrosis (Lantern Demonstration). HENRY O. JONES, Altoona.
2. Hydronephrosis with Multiple Calculi. HERMAN A. GAILEY, York.
3. Rupture of the Urinary Bladder. JOHN H. FAGER, JR., Harrisburg.
4. Foreign Body in Urinary Bladder of Child. DANIEL P. RAY, Johnstown.
5. Right Renal and Ureteral Calculus Simulating Sciatica (Lantern Demonstration). CARLYLE N. HAINES, Sayre.
6. Pyonephrosis—Ureterectasis (Lantern Demonstration). JAMES B. PURCELL, Wilkes-Barre.
7. Malignancy in Bladder Diverticulum (Necropsy Specimen). GEORGE J. MUELLERSCHOEN, Philadelphia.

Discussion opened by LORENZO F. MILLIKEN, Philadelphia (10 minutes).

Officers' Department

WALTER F. DONALDSON, M.D.
Secretary
8063 Jenkins Arcade Bldg.,
Pittsburgh, Pa.

CONTRIBUTIONS TO MEDICAL BENEVOLENCE FUND

The Committee on Medical Benevolence gratefully acknowledge the following contributions to the Medical Benevolence Fund:

Woman's Auxiliary to Dauphin County Medical Society	$300.00
Woman's Auxiliary to Westmoreland County Medical Society	100.00
Woman's Auxiliary to Potter County Medical Society	8.00
A Friend (Allegheny County)	10.00

ASSISTANT SECRETARY CHRISTIAN B. LONGENECKER

It is with sadness that we record the recent death of Dr. Christian B. Longenecker, of Philadelphia. Dr. Longenecker, who represented his county medical society in many sessions of the House of Delegates of our State Society, was in 1917 elected Assistant Secretary.

The present Secretary again expresses appreciation of the fine support so cheerfully given by Dr. Longenecker, not only in the House of Delegates at each annual session for the past eleven years, but also in all the duties related to the Secretary's office during the annual sessions of the Society, and at the Annual Conference of Component Society Secretaries.

Dr. Longenecker was present at every session of the State Society since 1900. His presence will be greatly missed at future annual meetings, but we are confident that impressions of his upright character, his splendid service, and his genial personality will long survive in the memories of hundreds of our members.

MEMBERSHIP LIST

The 1930 membership list, as of July 1, containing the names and addresses of the members of our sixty-two component county medical societies in good standing at that time, as well as their officers and committees, has been printed and distributed this month among the proper officers of the State Society and the component societies. The list also contains the names of the ex-presidents of the State Society, and the names of members who have died between July 1, 1929, and July 1, 1930. A copy of the list will be forwarded to any member upon request made to the Secretary's office, Jenkins Arcade Building, Pittsburgh, or the JOURNAL Office, 230 State St., Harrisburg. The published list each year is bound with the PENNSYLVANIA MEDICAL JOURNAL for the fiscal year and filed in the archives of the Society and in the office of the Secretary.

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to July 15:

ADAMS: *Removal*—Walter S. Mountain from New Oxford to Chambersburg St., Gettysburg.

ALLEGHENY: *Deaths*—Adam P. Fogelman, Sheridan (Lebanon Co.) (Univ. of Pa. '84), recently, aged 70; Gottfried Arn, Pittsburgh (Univ. of Pgh. '95), July 11, aged 63.

BLAIR: *New Members*—James M. Cameron, 1110 Twenty-second Ave., George A. Snyder, 1202 Sixteenth St., Altoona.

Chester: *Removal*—J. Huston Johnson from Glen Moore to Mont Alto (Franklin Co.); Elsie M. Morris from Pennhurst to Vassar College, Poughkeepsie, N. Y.

Clearfield: *New Member*—Harry A. Vosburg, Jr., Deposit National Bank Bldg., Dubois.

Dauphin: *New Member*—Jay D. Smith, 1253 Derry St., Harrisburg.

Delaware: *New Members*—Taylor M. Beagle, 904 Eleventh Ave., Moore; Clara L. Davis, 55 Berkley Ave., Lansdowne; Anthony W. Daniell, 242 Long Lane, Upper Darby; George B. Heckman, 16 Park Ave., Swarthmore.

Erie: *Removal*—Roy S. Minerd from Erie to Box 386, Smethport.

Greene: *Transfer*—Charles W. Thompson, Smithton, from Westmoreland County Society.

Huntingdon: *Death*—James M. Johnstown, Huntingdon (Coll. P. & S. Balt. '96), May 5, aged 68.

Lancaster: *New Member*—Isaiah L. Moyer, Columbia *Deaths*—George E. Day, Strasburg (Jeff. Med. Coll. '84), July 9, aged 68; James W. Keath, Ephrata (Jeff. Med. Coll. '15), June 24, aged 42.

Lehigh: *New Member*—Edmund F. Hanlon, 1116 Hamilton St., Allentown.

Mercer: *Removal*—Judson Cooley from Sandy Lake to Stoneboro; Harold A. Daugherty from Harrisburg to Grove City; Thomas F. Hogue from Greenville to Fredonia; Irvin E. Rosenberg from Sharon to c/o Dr. F. J. Kellam, Indiana.

Monroe: *Transfer*—Donald G. Egolf, E. Stroudsburg, from Dauphin County Society.

Philadelphia: *New Members*—Lillian S. Alpers, Medical Arts Bldg., Joseph T. Cadden, 5259 Whitaker St., Franklin F. Osterhout, 7301 N. 21st St. *Deaths*—Earl L. Brewer, Philadelphia (Univ. of Pa. '22), June 10, aged 35; Henry G. Bruner, Philadelphia (Jeff. Med. Coll. '84), June 25, aged 73.

Potter: *New Member*—Carroll W. Kjelgaard, Galeton. *Reinstated Member*—Franklin P. Farwell, Galeton.

Somerset: *Removal*—Charles C. Cooner from Bedford to R. F. D. 3, Foster Ave., Vineland, N. J.

Tioga: *New Member*—Frank Vincent, Mansfield.

Union: *Death*—David M. Sampsel, Winfield (Coll. P. & S. Balt. '84), recently, aged 75.

Warren: *Death*—Ernest J. Cowden, N. Warren (Univ. of Buffalo '82), June 12, aged 72.

Washington: *New Members*—Joseph E. Novotny, 968 McKean Ave., Donora; August F. G. Paetzel, Bertha.

Wyoming: *New Member*—Kenneth M. Taylor, Meshoppen.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since June 20. Figures in first column indicate county society numbers; second column, State Society numbers:

1930				
June 20	Delaware	110-114	7688-7692	$37.50
23	Lawrence	63	7693	7.50
24	Wyoming	9-11	7694-7696	22.50
	Washington	130-131	7697-7698	15.00
	Allegheny	1297-1301	7699-7703	37.50
26	Lancaster	155	7704	7.50
	Dauphin	179	7705	7.50
	Crawford	34	7706	7.50
	Northampton	136-138	7707-7709	22.50
28	Dauphin	180	7710	7.50
	Dauphin	181	7711	7.50
	Potter	12	7712	7.50
July 2	Lycoming	112	7713	$7.50
	Greene	28	7714	7.50
	Luzerne	296	7715	7.50
3	Blair	102-106	7716-7720	37.50
5	Jefferson	47	7721	7.50
	Philadelphia	2052-2067	7722-7737	112.50
7	Westmoreland	171	7738	7.50
8	Lehigh	133	7739	7.50
9	Potter	13-14	7740-7741	15.00
	Allegheny	1302-1307	7742-7747	45.00
11	Lawrence	64	7748	7.50
	Tioga	24	7749	3.75
14	Somerset	38	7750	7.50
	Clearfield	63	7751	3.75
	Venango	51	7752	7.50

COMMITTEE ON SCIENTIFIC WORK

C. Howard Marcy, M.D., *Chairman*
Pittsburgh, Pa.

PROGRAM OF THE SECTION ON DERMATOLOGY

The Section on Dermatology has this year arranged a program that will appeal to both specialist and general practitioner. The differentiation of the rashes of the exanthemata are to be given and illustrated by such eminent authorities as Dr. Jay F. Schamberg and Dr. Samuel S. Woody, superintendent of the Philadelphia Hospital for Contagious Diseases. In addition to this exceedingly important subject, Dr. George MacKee, one of the best known dermatologists in the country, professor at the New York Post Graduate School, author of one of the most popular textbooks on cutaneous therapeutics by means of radium and x-rays, is to give a talk on "Oral and Skin Cancer," which no one interested in this subject can afford to miss. He is one of the few men able to authoritatively speak on this subject, particularly, oral cancer. A half hour dry clinic will complete the section's session. The importance of actually seeing, in order to recognize diseases of the skin was kept in mind by the Section Committee with the dry clinic as the outcome.

Men interested in skin diseases, the exanthemata, oral and skin cancer, and the ringworm fungi, will be amply repaid by attending the one-day meeting of this section.

PROGRAM OF THE SECTION ON UROLOGY

The program arranged for the Urologic Section of the Medical Society of the State of Pennsylvania is of practical interest to both the urologist and the general practitioner.

The officers of this section felt that genito-urinary tuberculosis would be a very timely and interesting topic for a symposium with the Med-

ical Section. This has been arranged with the basic idea of presenting not only the problems in diagnosis but also to attempt to clear up some differences as which cases demand surgical intervention and which are best served by nonsurgical treatment. There are borderline cases that present the problem as to where they should be allotted, to the surgeon or the internist. These cases have always occupied a sort of no-man's-land position. It was with a view to attempt to allocate properly such patients that the symposium was arranged. The officers of this section feel sure that much practical benefit will accrue to both sides by a thorough discussion of genito-urinary tuberculosis. The program is so arranged that practically all phases of the subject will be presented.

The remainder of the program includes subjects of every day occurrence in the field of the general practitioner. They will be presented in such manner that they cannot but be of value to the family physician as well as to the specialist.

It is the ambition of the Section on Urology to present a program of practical utility to the profession at large.

COMMITTEE ON PUBLICITY

J. D. KEIPER, M.D., *Chairman*
Johnstown, Pa.

FOREWORD FOR THE SEPTEMBER JOURNAL

The September issue of the PENNSYLVANIA MEDICAL JOURNAL will be the Johnstown number. All information concerning Johnstown, maps, routes, transportation, general headquarters, hotels, meeting places, entertainment, etc., will be elaborated in this issue. Everything, except the weather, for the Eightieth Annual Session of the Medical Society of the State of Pennsylvania, will be specifically stated and definitely promised. Remember the date, October 6 to 9!

CONTRIBUTIONS FOR OCTOBER JOURNAL

To be of maximum value, county society reports should be published as soon after the meetings as possible. The material for the October issue of the PENNSYLVANIA MEDICAL JOURNAL should be received in this office not later than September 18. Articles or reports received after this date will be published in the November JOURNAL. The assistance of county society reporters is requested and will be appreciated. This earlier date of closing the forms for the October JOURNAL is necessary because the material for the press must be approved for publication before the office closes for the staff attendance at the convention.

County Society Reports

ALLEGHENY—JUNE

The outstanding feature of the scientific meeting for June was Dr. M. A. Slocum's paper on the treatment of varicose veins. For clarity and completeness it is one of the best we have heard this year.

For several years the society has conducted a case report contest among the hospital interns of the county. Cash prizes are awarded the winners. The first prize for 1929-1930 was awarded to Dr. Murray F. McCaslin, University of Pittsburgh, intern at Columbia Hospital. The subject of his interesting case report was "Chronic Lymphatic Leukemia in a Young Child with Situs Inversus Viscerum."

"The Treatment of Varicose Veins by Sclerosing Drugs." M. A. Slocum, M.D.—*History.*—The history of the injection treatment of varicose veins dates from the invention of the hypodermic syringe by Pravez, in 1851. Since that time much work has been done by many physicians. Among those who have contributed to this subject were Chassaignac, 1853; Degranges, 1855; Vallett, 1875; English, 1884; Taval, 1904; Schiassi, 1908; Linser, 1911; Genevrier, 1921; Montpelier and LaCroix, 1922; and Kausch, 1927.

Etiology.—Much has been written but little is actually known about the causes of varicose veins. The condition unquestionably occurs in many members of the same family, thus indicating the factor of heredity. Pregnancy frequently initiates the condition. Some of the infectious diseases are prominent in the etiology, especially typhoid fever. Whatever the actual cause may be, a structural change occurs in the veins, the valves weaken and finally cease to function. The walls are at first thickened, later thinning out to the thickness of tissue paper. Obesity most certainly plays a part in the etiology of varicose veins.

Age and sex.—The condition is most prevalent between the ages of 20 and 50 years, with very marked preponderance of women over men.

The operative treatment.—Fairly good results have been obtained by surgeons for many years, but redevelopment of varices often occurs, wound infection with scar formation is not uncommon and long periods of hospitalization with its accompanying economic loss mitigate against the value of the operative treatment.

Indications for the injection treatment.—Practically all types of cases can be cured by injection. In cases of old phlebitis, injection not only cures the condition but prevents further attacks of the disease.

Contra-indications.—Varices due to intrapelvic compression only should not be injected. Varices due to portal obstruction or inoperable cancer should never be treated. Acute or subacute phlebitis, especially accompanied by brawny edema should never be treated by injection. Pregnancy per se is not a contra-indication when the patient has varices of long standing.

Complications and dangers of the injection treatment.—Embolism is a hypothetical danger only. Several hundred thousand cases have been reported without instance of embolism. Infection occurs only as the result of an error in technic or after injection into an infected area. Sloughing and deep necrosis may occur, but only when the solution used is permitted to seep out of the vein into the tissues.

Solutions used.—After trying them all Dr. Slocum considers that the best results follow the use of a solution containing quinin hydrochlorid 4 grs., urethan 2 grs., distilled water qs. 2 mls.

Technic.—Glass syringes of 2 ml. and 30 ml. are needed. Rustless needles with short beveled points must be at hand, also two pieces of rubber tubing for tourniquets. The patient is asked to stand for 2 or 3 minutes. The vein to be injected is chosen and a tourniquet applied above and below it. The patient then is placed upon the table. The skin is prepared and the loaded syringe with needle on is made ready. The needle is introduced into the vein lumen, great care being observed that it does not perforate the vein. Blood is aspirated into the syringe and then the sclerosing solution slowly injected. As soon as the needle is withdrawn a firm pad is applied to the site injected and hand pressure maintained for several minutes. The tourniquets are then removed and an elastic bandage applied firmly. This is left on until the next treatment or at least for three days in order to completely obliterate the lumen. The value of this last step is to be greatly emphasized. If the compression bandage is removed too soon, the diameter of the sclerosed vein will be much greater than if the vein walls are kept in intimate contact. It is best to begin injections just above the ankle or below the knee. At times more than one vein may be done at a sitting, but both legs should not be injected at one time. Twice a week is usually often enough to carry out the treatment. The Trendelenburg test should be applied to every patient before beginning injection treatments.

Conclusion.—The operative treatment of varicose veins should be relegated to the past. Regardless of the physician's opinion the patient will demand the sclerosing treatment. The method is safe, sure, and effects a permanent cure. From an economic standpoint its appeal is too great to be overlooked.

A. B. Thomas, M.D., *Reporter.*

BERKS—JULY

One hundred and fifty-seven persons attended the annual outing of the Berks County Medical Society and the Woman's Auxiliary, July 9, 1930, at the Green Valley Country Club. During the afternoon the women played bridge. Prizes were won by Mrs. Harry Corrigan, Mrs. F. P. Werner, and Mrs. L. C. Darrah. Dr. Wm. L. Hiester proved to be the deciding factor in the tug-of-war. In the pill-guessing contest the closest man was Dr. Geo. Leibensperger, and the nearest woman, Mrs. H. W. Miller. Dr. F. W. Knoll was better than Dr. D. T. Hunt at bursting the balloon. Dr. E. D. Funk was the fastest cracker-eater; Dr. F. Lee Terry was a close second.

During the "4 inning" base-ball game there were four casualties. Dr. H. W. Bagenstose, captain of the Sclerotics, sustained a laceration of the lip, which required three sutures; Dr. E. D. Funk received a hematoma of the right leg; Dr. M. M. Wassersweig was hit on the jaw by the baseball bat; Dr. R. L. Reber was found to have a fractured toe. Dr. R. M. Alexander's Diabetics won the game; the score was 12 to 1.

Prizes for dancing, in the evening, were won by: Dr. S. W. Gryczka, Mrs. E. W. Rothermel, Dr. Ralph Hill, Dr. Alice Bush, Dr. Paul Cahanowitz, Mrs. Hans Nix, Miss Eleanor Smith, and Dr. Halloran.

Dinner speakers were Drs. E. D. Funk, L. J. Livingood, and J. H. Rorke. Singing was in charge of Dr. E. D. Funk. Recreation was in charge of Charles Brightbill of the City Recreation Department. The picnic was in charge of the program committee: Dr. LeRoy Fredricks, chairman, assisted by Drs. Cecil M. Freed, Cyrus B. Zimmerman, and Pearl E. Hackman.

Pearl E. Hackman, M.D., *Reporter.*

BLAIR—MAY-JUNE

A symposium on "Sterilization of the Mentally-defective Patient" featured the May meeting, held at the Blair County Hospital as guests of Dr. Henry Summers. Dr. H. C. Thomas presided.

Dr. DeJarnette, superintendent of the Western State Hospital of Virginia, made an earnest plea for sterilization of mental defectives. Dr. DeJarnette cited as need for stopping the great increase in the feebleminded, the statistics showing that throughout the country, the state, and county institutions, were already caring for twice as many patients as they were designed to provide for and that three times these numbers were applying for admission to such institutions.

Also that almost 50 per cent of all public taxes were being spent caring for public dependents. He cited several known families, traced through 5 or 6 generations, whose feebleminded descendants were now costing the state over a million dollars yearly.

In Virginia, 500 have been sterilized, and the authorities are contemplating sterilization of 500 yearly, and figure that 40 births yearly will be prevented in each of these series. In regard to the patient thus treated, Dr. DeJarnette states that the procedure is kindness itself, as salpingectomy and vasectomy prevent suffering, particularly gonorrheal complications in the already oversexed mental defective, and saves the innocent potential offspring of these individuals from our prisons and prison systems which are necessarily cruel. Dr. DeJarnette ended his address with an impassioned plea for sterilization legislation in Pennsylvania.

Dr. Harvey Watkins, of the Polk School for Feebleminded, and vice president of the National Association for the Feebleminded, favored sterilization of mental defectives, but took a middle ground stand and asked for selective sterilization and offered a constructive plan, which consists of (1) consent of relatives; (2) selection of patients by a board of four neurologists and psychiatrists and one lawyer, who are empowered to ask for any consultations they may deem necessary; and (3) a competent surgeon to perform the operation, surrounded by legal authority in such a way that he can not be held liable to legal suit.

Dr. Watkins defended sterilization by stating that it is not injurious and must be dissociated in the public mind with castration, that it does not promote promiscuity as only 1 in 12 in California, where thousands of sterilizations were done, were found promiscuous, and that it would make safe for parole many thousands of feebleminded who have been educated as far as they can be, but must be kept until they are 35 or 40 years of age for social reasons. Sterilization is more important in girls because they fit a passive rôle, while boys usually lack the aggressiveness necessary to sexual

life. Idiots are already sterile and low grade imbeciles will always be institutional charges, and therefore do not need sterilization. Dr. Watkins sounded a note of warning in that enactment of sterilization legislation should not be felt to be a cure-all, and that curtailment of public funds for institutions for mental defectives must not result from such enactment.

Dr. J. Allen Jackson, of Danville, chairman of the State Committee on Mental Hygiene made a plea for the general practitioners of medicine to increase their psychiatric knowledge by participating in county mental health clinics, medical school clinics, and use of the journals, so that they may better classify and treat mental disease. He also told how Pennsylvania is trying to help the psychiatric situation by (1) a mental health day which has now been so extended that the Woman's Auxiliary can participate; (2) having a paper on neuropsychiatry on the program of the general session of the State Society meetings and (3) aiding physicians to become "mental health conscions."

Dr. Theodore Diller, of Pittsburgh, spoke briefly congratulating Dr. Watkins on his plan for sterilization of mental defectives, and stating that some calm, judicial plan as Dr. Watkins' was necessary. He felt that care of the mentally-ill had suffered in the past from apathy, but that it was now beginning to assume its rightful place.

Luncheon was served following the meeting.

The June meeting was held in conjunction with the annual Altoona Hospital Clinic. The meeting was held in the spacious fracture ward of the hospital, and was preceded by luncheon. About 150 members and guests were in attendance.

The clinic was begun at 2 p.m. the first feature being a motion picture, entitled "A Normal Breech Delivery," given and discussed by the obstetrical department.

Dr. J. D. Hogue spoke on "Electrocoagulation of Tonsils." Dr. Hogue urged this method of tonsillectomy for adults who were not good anesthetic risks, in patients to whom hospitalization and convalescence were economic losses, and as a method which is freest from trauma to adjacent tissue structures. Dr. Hogue presented 3 patients as examples of the type of end result which can be obtained by means of electrocoagulation, and these throats were inspected with much interest.

Dr. Harry Collett presented 6 cases of "Carcinoma of the Large Bowel" and brought out the important early symptom that "any change in bowel habit in patients in the cancer age," should arouse suspicion of the presence of malignancy, and stressed that classical symptoms were always late symptoms.

Dr. L. P. Glover spoke on "The Relation of Ophthalmology to Systemic Disease." He reviewed the eye symptoms in such diseases as diabetes, nephritis, eclampsia, syphilis, cranial injuries, and growths, and in anemias. Dr. Glover particularly decried the use of salvarsan and neosalvarsan in eye manifestations of syphilis and urged early (in infancy) treatment of congenital syphilis as a prevention of keratitis.

Drs. J. H. Galbraith and Ben Hull gave a short talk and demonstration, with four patients, of "What You should expect of Electric Treatment of Nerve Injuries." Their cases were all musculospiral paralyses secondary to fractured humeri. They demonstrated methods of nerve testing and nerve stimulation, and showed how these tests lead to operative repair with at least 75 per cent regained function. One of their patients was repaired almost 3½ years after his paralysis had occurred.

Dr. S. Paul Taylor talked briefly on 100 consecutive cases of "Spinal Anesthesia," using the Koster technic. In this series there was one operative death and from this Dr. Taylor felt that a patient who could not stand the Trendelenburg position for a period of two hours should not be given spinal anesthesia. Septic cases showed no evidence of meningeal irritation, remarkable relaxation was easily obtained and several operations on the thorax were shown in his series. No post-operative complications attributable to the anesthesia were found and convalescence was hastened in 90 per cent of the cases. Dr. Taylor also showed how from 2 to 8 doses of luminal the night preceding and pre-operatively resulted in the patient going to sleep on the operating table and awaking 24 hours after operation with no knowledge of what had transpired.

The clinic closed about 4.30 p.m. and was adjudged quite successful.

Edward F. Williams, M.D., *Reporter.*

HUNTINGDON—JUNE

The monthly meeting of the Huntingdon County Medical Society was held Thursday, June 12, at the J. C. Blair Memorial Hospital. Dr. Frank Guillard, of Saxton, read a paper on "Various Cardiovascular Diseases." He stated that the limitation of blood supply to the various organs including the heart, is the natural result of arteriosclerosis, and a general atrophy of all the organs must and does occur. Owing to the increased death rate each year from cardiovascular conditions, the paper dealt more especially with etiology. *Inherited,* congenital (syphilitic); *acquired,* chronic infections (pyogenic), intestinal toxemia (tobacco and alcohol questionable), chronic poisoning (lead, focal infections, gout, diabetes, and hard muscular labor). Overeating was stressed. Mental strain is probably the prime cause in this age. Syphilis is a cause without question.

The symptoms are vertigo, tinnitus, dull headache, numbness and tingling in the extremities, neuralgias, indigestion, and forgetfulness. Other symptoms are due to involvement of brain, heart, and kidney. Diagnosis by exclusion unless the vessels are palpable or shown in roentgenograph.

Thrombosis of the coronary arteries is a most serious result of sclerosis. If a person, usually a male, has an occasional burning or stabbing pain over the heart, gradually associated with shortness of breath, is suddenly seized with a most severe pain, gasps for his breath, breaks out into a cold sweat and may vomit he is in a most serious condition. He may have the one attack with remissions for 2 or 3 days and this is usually called acute indigestion.

There are three groups: those who die at once, those who live a few hours, and those who live for a number of years.

Angina pectoris presents a simulating condition, but the vise-like constriction of the heart with its radiation down the left arm is almost diagnostic. The physical findings prior to an attack may apparently be normal. (In youth associated with rheumatic or syphilitic aortitis.) It is thought that the excessive use of tobacco, emotions, and muscular exertions will bring on attacks.

Acute myocarditis may be caused by infections of acute diseases; and the chronic type is usually produced by rheumatism or syphilis. It occurs at any age. Beginning dyspnea and wheezy cough should be a warning. Usually not treated until the heart decom-

pensates, beginning Cheyne-Stokes respiration and edema resulting. Such patients are nervous, sleepless, and hard to control. Overstimulation should be avoided. Sedatives, rest, and graduated exercise and regulation of habits of living are important.

John M. Keichline, M.D., *Reporter.*

NORTHWESTERN PENNSYVANIA ASSOCIATION—JULY

About 60 members from the northwestern section of Pennsylvania assembled Friday afternoon, July 11, at Conneaut Lake Park for their annual meeting.

After the dinner, which was attended by the families of the members, as well as the members themselves, Dr. William L. Mullen, of the staff of the Mercy Hospital, Pittsburgh, gave a very practical talk on "Some Aspects of Coronary Occlusion With Reference to Abdominal Symptoms." He stated that blood pressure was usually low and that the symptoms of the abdominal distress in many instances were similar to many other infections of the upper abdomen and were to be watched. There is usually a history of previous pain and dyspnea. No special treatment was outlined, but it was thought that something that would dilate the corneal vessels might give relief from the pain.

He was followed by Dr. J. P. Griffith, of the same hospital, who gave a talk on "Surgical Problems of Gall-bladder Disease." Dr. Griffith outlined the various classes of patients in whom cholecystectomy was indicated rather than drainage alone, and dwelt particularly upon the anomalies of the ducts and the circulation where double ducts were often encountered and when not carefully looked for might be a cause of failure after operation. Several pictures were shown to illustrate this point. He also spoke of the necessity of distinguishing between the various types of jaundice.

The third speaker, Dr. W. G. Maclachlan, also of the Mercy Hospital, spoke on "Some Clinical Aspects of Pneumonia." He stated that the mortality from pneumonia in Pittsburgh was as high as 50 per cent; whereas only 7000 persons died from cancer in New York City, 7300 persons died from pneumonia. He thought that some publicity should be given to this fact so as to reduce this enormous mortality. On the other hand, in the West, as at the Mayo Clinic, out of 4000 autopsies on persons dying from various causes only 6 cases were found due to pneumonia. He wondered why there was this tremendous difference, and that in speaking of treatment we should take into consideration the locality in which the disease occurs. Industrial gases, like sulphur dioxide, as found in the air in Pittsburgh, may play a rôle in causing greater mortality. A great difference is to be found in the pneumonia that follows operations from the kind that occurs after a toxic form. The postoperative kind may be due to a plugging of the bronchi, so as to cause a collapse of the lung. Such cases are helped by the breathing of oxygen and carbon dioxid, and such cases, if not mistreated by drugs, usually recover. In these postoperative cases, the pulse is a sensitive guide; if below 120, it is a favorable sign. The death rate is high in the toxic group, and pneumococci are usually present in the blood culture. The treatment is largely symptomatic. The patient must be sustained and enemas are not always safe because they add to fatigue. As much carbohydrate fluid as possible should be given. Dextrose solution, about 3 quarts in 24 hours, furnishes the fluid and sufficient calories. Digitalis he found useless in febrile conditions; it may add an extra toxic danger. Serum has not been found to benefit. Dextrose solutions, intravenous, by causing diuresis may be of some benefit. The deaths in these patients are probably connected with a respiratory center. Lumbar puncture has sometimes seemed helpful, but look to the future for some specific that will act on the pneumococcus as salvarsan acts on syphilis.

The following officers were elected for the ensuing year: President, Dr. F. M. Summerville, Oil City; vice-president, Dr. C. C. Ross, Clarion; secretary and treasurer, Dr. M. V. Ball, Warren. An executive committee will determine next year's program and place of meeting, as it was decided unanimously to continue the organization. This meeting is a joint one of the medical societies of Erie, Crawford, Venango, Mercer, Clarion, Clearfield, Warren, and McKean Counties.

M. V. Ball, M.D., *Reporter.*

YORK—MAY

The May meeting was held on Thursday, the 15, in the auditorium of the Y. M. C. A. The speaker was Dr. Joseph C. Bloodgood, of Johns Hopkins University, who spoke on the subject of the curability of cancer when recognized and treated in time. The meeting was open to the public and more than 500 representative members of the community were present. Dr. Bloodgood commended the press of York for its aid in promoting the movement for intelligent education of the public to prevent and cure cancer. The fact that York is very fortunate in having good water to drink was brought out by Dr. Bloodgood, in favorable terms, and he said all the milk should be pasteurized. He advised those present that as there is little new in the correct information necessary for protection against cancer, and as this information must be given to the public repeatedly, meetings of this kind have become the most important and perhaps the essential factor in educating the public. Although proper surgical treatment for cancer has been developed for more than thirty years, numerous deep x-ray machines are available throughout the world, there are increasing amounts of available radium, there is a tremendous improvement of the medical schools, and there are very efficient educational efforts of the American Society for the Control of Cancer, the death rate of cancer has increased from the eighth place in 1920 to the second place in 1929. The only controllable factors today in the prevention and cure of cancer are the duration of the disease, the earliest possible diagnosis, and the proper treatment by surgery and irradiation. The first controllable factor can only be made successful by the education of the children in the primary schools and of the people outside of the schools. The second controllable factor, by the education of the medical and dental professions, and improvement in teaching in the medical schools and the further standardization and improvement of hospitals. It is Dr. Bloodgood's opinion that the proper education of the public and the profession will place cancer of the skin and mouth among the preventable diseases, just as certainly toxin-antitoxin is eliminating diphtheria. The complete control of cancer depends upon research. The full development of research rests upon a much larger educational class which can influence the people to demand of their representatives larger grants for such research which has for its object the protection of the people against disease.

At the conclusion of Dr. Bloodgood's address, Dr. J. Fletcher Lutz, president of the York County Medical Society, delivered a brief talk and showed, with the

aid of lantern slides, the result of deep x-ray therapy on several patients.

MILTON H. COHEN, M.D., *Reporter.*

The Woman's Auxiliary to the Medical Society of the State of Pennsylvania

MRS. WILDER J. WALKER, *Editor*
546 South Street, Greensburg, Pa.

THE MONTHLY MESSAGE OF THE PRESIDENT

DEAR AUXILIARY MEMBERS:

The sixth annual meeting of the Woman's Auxiliary to the Medical Society of the State of Pennsylvania will be held in Johnstown, October 6 to 9, 1930.

Hotel headquarters will be in the Hotel Fort Stanwix and room rates start at $2.00 per day per person. Headquarters for registration, meetings, etc., will be in the Elks Home, Locust Street near Franklin.

All resolutions to be offered at either the Board meetings or the general meetings should be in writing and signed, and placed in the hands of the Committee on Resolutions at least 24 hours before the session at which they are to be presented. Mimeographed copies of all proposed resolutions will be distributed at the opening of every session.

The chairman of the Committee on Resolutions is Mrs. John R. Davies, Blossburg, Tioga County.

The chairman of the Committee on Credentials and Registration is Mrs. Clarence M. Harris, 332 Luzerne Street, Johnstown.

Credential cards and instructions to delegates and alternates will be sent out by the treasurer on September 1.

All committee and county reports must be *typewritten* and a copy must be filed with the recording secretary. They may be as detailed as desired, but a time limit of 3 minutes for their presentation will be strictly enforced. Should it require more than 3 minutes to read them, an abstract must be prepared for use at the Convention, but the complete report will be published in the State JOURNAL. No verbal report will be accepted, nor may any county report be read save by a delegate from the county in question.

I hope you understand that all auxiliary meetings are open to every doctor's wife—or better, to all the doctors' "women folks"—and that they will all be welcome whether they are members of the auxiliary or not. Naturally, only delegates may take part in the discussions or vote, and no one may go as delegate or alternate whose dues are not fully paid. County presidents will be held responsible for the eligibility of their representatives.

The program for this year offers several new features. First is the opportunity to entertain Pennsylvania's first national president, in whose honor a luncheon is to be given at the Capital Hotel on Monday, October 6. Mrs. Hunsberger will also grace our auxiliary luncheon on Tuesday, where she will lay aside her national robes of office and act as toastmistress.

Following the luncheon on Monday there will be a series of short, informal round tables—35 minutes each—dealing particularly with certain phases of auxiliary work, and conducted by the chairmen of the corresponding State Committees. These are of course open to everybody, and I hope that county officers and committee chairmen will avail themselves of this opportunity for informal discussion with others interested along the same lines. I believe they will prove very helpful.

The delegates to the meeting of the State Medical Society and their wives will be the guests of the Cambria County Medical Society on Monday evening, but members of the State Board of the Auxiliary must forego this festivity and devote their attention to the solution of weighty problems at the preconvention Board meeting.

The general meetings of Tuesday and Wednesday follow established custom, and on Thursday morning we shall have a brief meeting of the new Board, followed by an open meeting at which Mrs. McCullough will outline her plans for the year 1930-31, and at which every auxiliary member is invited—nay, urged—to discuss any phase of auxiliary work in which she is interested. I particularly bespeak your attendance at this Thursday meeting. It heartens up a new president to have a large and interested group, it will put us all in closer touch with the new administration, and we shall all go back home full of enthusiasm for the season's work.

Do not be terrified at the vista of endless reports. The chairmen of State Committees will all report, but only those county reports will be presented which can be read in person by a member of the county auxiliary. And let no one imagine for one moment that the 3-minute time limit is an idle jest. Any member expecting to read a report at the Convention will do well to practice aloud at home with a stop watch in her hand, or she may lose her

precious peroration! "Not to the strong is the battle" in this case, but absolutely "to the swift is the race." I think it's going to be as exciting as a Kentucky Derby, to see who can say the most in an intelligible manner in 3 short minutes. We shall all feel like referees counting out at a fight.

Let me call your attention particularly to the rule in regard to offering resolutions. This is not intended to prevent any delegate from offering any resolution she may think fit, but merely to expedite the conduct of business by making sure in advance that every resolution is in proper form for consideration by the Convention. Moreover, by having resolutions mimeographed, every person in the room will have an opportunity to study them before they come up for action, which again makes for clear thinking and quick dispatch of business.

The parties planned would excite you even more had you seen the beautiful Sunnehanna Country Club at which the bridge luncheon and the President's Ball will be held. The building seems specially designed for our use, and there is a large landing field directly in front of the club for the pleasure of those who are "air-minded." The beautiful estate of Mr. Charles M. Schwab will be thrown open for our delectation, and we shall enjoy a wonderful drive through our Pennsylvania mountains, all ablaze in their autumn splendor.

And, finally, our Convention Chairman, Mrs. Meyer, with unexampled presence of mind, has placed her order so early with Celestial Spheres, Inc., that we are assured of a *full moon,* to be delivered on Tuesday, October 7! Could prevision further go?

Faithfully yours,

Corinne Keen Freeman, *President.*

PROGRAM

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA, JOHNSTOWN, PA.

October 6 to 9, 1930

ELKS' HOME, LOCUST STREET

Monday, October 6

12.30 p. m.—Capital Hotel, Main and Walnut Streets. President's luncheon to the members of the State Board, the District Councilors, the Presidents of the County Auxiliaries, the Chairmen of the Convention Committees, and the officers of the Cambria County Auxiliary, in honor of Mrs. J. Newton Hunsberger, President of the Woman's Auxiliary to the American Medical Association.

2.00-4.05 p. m.—Capital Hotel. Round-table Conferences in the *Sun Room.*

2.00 p. m.—Mrs. Theodore B. Appel presiding. Subject, "Administrative Problems" (of special interest to District Councilors and County Presidents).

2.45 p. m.—Mrs. Wilmer Krusen presiding. Subject, "Public Health Education."

3.30 p. m.—Mrs. John H. Page presiding. Subject, Periodic Health Examinations."

(Note—Each conference will last 35 minutes with 10-minute intermissions.)

6.30 p. m.—Promptly. *Sun Room of Capital Hotel.* State Executive Board Dinner.

7.30 p. m.—State Executive Board Meeting. Mrs. Walter Jackson Freeman presiding.

8.30 p. m.—Motion pictures at the various theaters.

Tuesday, October 7

9.00 a. m.—Promptly. *Opening meeting at Elks' Home, Locust Street.*

Call to order and address by the President, Mrs. Walter Jackson Freeman.

Announcement of the Nominating Committee, Mrs. William E. Parke, *Chairman.*

Address of Welcome, Dr. Joseph J. Meyer, *President of the Cambria County Medical Society.*

Response, Mrs. T. Kenneth Wood, *First Vice-President of the Woman's Auxiliary to the Medical Society of the State of Pennsylvania.*

9.45 a. m.—Adjourn to the Opening General Meeting of the State Medical Society, State Theater, Main Street.

12.30 p. m.—Auxiliary Luncheon at Capital Hotel, Main and Walnut Streets.

Toastmistress: Mrs. J. Newton Hunsberger.

Speakers: Dr. William T. Sharpless, Dr. Ross Vernet Patterson, Dr. Edgar S. Buyers, Dr. Walter F. Donaldson, Dr. Frank C. Hammond, Dr. Theodore B. Appel.

Guests: Dr. Joseph J. Meyer, Dr. Olin G. Barker, Dr. J. Allen Jackson, Dr. Charles H. Miner, Dr. Charles C. Ross, Dr. Thomas G. Simonton, Rev. Edward L. Reed, and Mrs. H. Raymond Yerger.

2.30 p. m.—General Meeting at Elks' Home, Locust Street.

Mrs. Walter Jackson Freeman presiding.

Call to order.

Invocation.
Rev. Edward L. Reed, *Rector of St. Mark's Episcopal Church.*

Address of Welcome.
Mrs. Calvin C. Rush, *President of the Cambria County Auxiliary.*

Announcements.
Mrs. Joseph J. Meyer, *General Chairman of the Convention.*

Roll Call of Counties.

Minutes.

Reports of officers, chairmen of standing committees, and presidents of county auxiliaries. (Limited to 3 minutes each.)

8.30 p. m.—Dramatic Entertainment by Little Theater Group.

Joseph Johns Junior High School, Market Street.

Wednesday, October 8

9.00 a. m.—Promptly. *General Meeting.* Mrs. Walter Jackson Freeman presiding.

Call to order.

Minutes.

Unfinished business.

New business.

Address, Mrs. J. Newton Hunsberger, *President of the Woman's Auxiliary to the American Medical Association.*

Report of the National Convention at Detroit. Mrs. Edward Lyon, *Councilor of the Seventh District, Chairman of the Committee on Public Relations.*

History of the State Auxiliary. Mrs. David B. Ludwig, *Historian, Chairman of the Committee on Archives.*

Report of the Nominating Committee. Mrs. William E. Parke, *Chairman.*

Election of officers.

Installation of new officers.

Adjournment.

1.30 p. m.—Luncheon and Bridge at the Sunnehanna Country Club.

7.30 p. m.—Public Meeting at Johnstown Central High School, Somerset Street.

9.30 p. m.—President's Reception and Ball at the Sunnehanna Country Club.

Thursday, October 9

9.00 a. m.—Promptly. *Executive Board Meeting at Elks Home.*

Mrs. John F. McCullough presiding.

10.30 a. m.—General Round-table Conference of Auxiliary Members and Visiting Ladies.
Announcement of State Committee Chairmen for the year 1930-31.

Outline of plans and policies for the year.

(NOTE—County Presidents and District Councilors are urged to be present.)

1.00 p. m.—Drive to Estate of Mr. Charles M. Schwab, Loretto, Pa.

3-5.00 p. m.—Teas at homes of Mrs. Olin G. A. Barker and Mrs. Lycurgus M. Gurley.

COUNTY AUXILIARY REPORTS

Allegheny.—Six years ago, when Mrs. Johnson brought the plans of the auxiliary from Reading, the builders gathered eagerly around her, clamoring for a part in the building of a County Auxiliary. The foundation was laid; the walls arose; the auxiliary was complete. And then the auxiliary began to settle. A criticism was enlarged upon; a fault was emphasized; and over in a corner the morale of a little group sagged. And yet, there was nothing the matter with the auxiliary. It was a good organization, firm and well built. It was settling; and now that it is settled it is a good auxiliary and a lasting monument to the women who have stood by through the period of its settling.

Under the leadership of Mrs. Charles A. Orr, it has finished its fifth year of life. It is a settled, recognized, and useful organization.

At the opening meeting of the year, on September 24, 1929, Dr. R. R. Snowden discussed "Periodic Health Examinations."

On November 26, 1929, Dr. A. J. Bruecken had for his subject, "Cancer." He illustrated his talk with lantern slides which he had made and colored.

The regular meeting on January 28, 1930, was held in conjunction with the District Councilor meeting. Dr. James I. Johnston, who was, at the time of his death, president of the Allegheny County Medical Society, spoke at this meeting. His last message was one of conservatism: "Work in a group for the greater good of the larger number, but avoid always the little thing which is the property of the individual or of some special group of workers."

Mrs. Walter Jackson Freeman, president of the State Auxiliary, discussed the auxiliary as a county and state organization. Her talk was interesting and illuminating.

A pageant, "The Healing Vision," was produced by members of the auxiliary, under the direction of Mrs. James I. Johnston.

Dr. Walter F. Donaldson told his story of "Medical Benevolence."

A theater benefit for the "Student Loan Fund" was given in the Pitt Theater, February 3, 1930. As a result of this benefit more than $950 was added to the fund.

"Mental health is that sense of well-being which enables one to adapt himself to an ever-changing situation and experiences, with satisfaction to himself and to those with whom he lives and labors," was the definition with which Dr. J. Allen Jackson opened his talk to the Woman's Auxiliary on March 25, 1930. It was an interesting afternoon. Dr. Jackson brought to us "mental health consciousness."

At the annual meeting and luncheon, Dr. Joseph R. Wentler talked of teeth and their influence on the future health of the race. The Allegheny County Dairy Council gave a puppet show, "The King of the Pearly Mountains."

Mrs. Curtis C. Mechling and her committee arranged the programs for the year. Mrs. Elsie Breese Mitchell had charge of the musical programs.

The first *Year Book* was published during this administration.

During all the years of its life, Mrs. Orr has been watching and dreaming of that time when the auxiliary would arrive. It is a beautiful and fitting thing that it was during her administration that the settling should be completed, that it might go calmly on, a finished and a perfect group.

Beaver.—Members of the auxiliary enjoyed a 1 o'clock luncheon at the Beaver Valley Country Club, Patterson Heights. Covers were arranged for about 25 members. Summer garden flowers were used for table decorations.

A business session was conducted by Mrs. L. L. Hunter, Midland, president.

The next meeting will be held September 11, at the Beaver County Tuberculosis Sanitarium, Monaca Heights.

Erie.—Mrs. J. A. Stackhouse, president, gave a bridge-tea at the home of Mrs. Merle Russell, South Shore Drive, Beverly Place, for Mrs. Walter J. Freeman, State president, who was here en route to the medical convention in Detroit. Mrs. C. Ford Heard presided at the tea table, which was attractively centered with garden flowers.

Mrs. Elmer Hess, chairman, and Mrs. J. D. Stark, vice-chairman, were assisted by the following in the listing of reservations: Mrs. H. E. Spaulding, Mrs. O. W. Renz, Mrs. Ray Luke, Mrs. Elmer G. O'Brien, Mrs. Charles McNeill, Mrs. J. B. Howe, and Mrs. R. L. Gibbons.

Mrs. C. Ford Heard, Mrs. George H. Clapp, and Mrs. H. E. McLaughlin were **party aides.**

Lycoming.—The auxiliary welcomes as new members: Mrs. Charles F. Bidelspacher, 716 Market St.; Mrs. Archibald M. Cook, 325 High St.; and Mrs. F. C. Lechner, Montoursville.

Preceded by the customary luncheon, the monthly meeting was held in the Woman's Club at 1.30 p. m., May 9, the president in the chair.

Mrs. E. W. Meredith, of Pittsburgh, a member of the Allegheny County Auxiliary, was a guest, and spoke briefly. She accompanied her husband, Dr. Meredith, who was a speaker at the Clinic Day Program of the Medical Society.

Dr. Thomas G. Simonton, Pittsburgh, was introduced and gave an instructive talk on Periodic Health Examination.

At the business meeting the treasurer reported $148.39 received, proceeds of the card party at Mrs. L. R. Worster's. Upon motion, $150.00 was appropriated to the State Medical Benevolence Fund, an increase of $50.00 over previous years. Three periodic health examinations were reported.

Mrs. John Campbell, Chairman for *Hygeia,* reported 9 new subscriptions.

The auxiliary accepted with pleasure the invitation of Mrs. P. H. Decker to hold their annual picnic in July at the Decker Cottage on Loyalsock Creek.

The first annual meeting of the auxiliaries of the Seventh Councilor District was held in conjunction with the monthly meeting, June 13, in the Woman's Club, preceded by luncheon at one o'clock. An invitation was extended to all the wives of physicians who are members of the County Medical Societies comprising the District, and to the members of auxiliaries in the Seventh District.

Following luncheon, three motion picture reels were shown, each taking twelve minutes. "Working for Dear Life," "Too Many Pounds," and "Jinx," the latter two reels being of a humorous nature.

Mrs. J. H. Page, of Potter County, read an interesting paper on Periodic Health Examination.

Mrs. Harry M. Hall, Wheeling, W. Va., and Mrs. Theodore B. Appel, Lancaster, who accompanied their husbands to this city, were guests of the auxiliary.

Following the program, arrangements were made for bridge and for drives about the city. Upon arrival out-of-town guests went to the Woman's Club, where the reception committee made everyone comfortable.

Montgomery.—The annual picnic was held June 18, at Memorial Park, Schwenksville. These picnics are very popular among our doctors because each year more and more attend. This year 120 were seated for supper. Doctors, their wives, and families are included. Many indulged in swimming before supper and some of the men had their usual quoit game.

We are planning this summer to have follow-up work to complete the work started by the preschool clinics held in April. The doctors made 135 examinations in the Norristown schools. We have set aside $50.00 for the purpose of having the defects brought to the attention of the parents before school begins in the fall.

We hope now to bend all our efforts towards a full representation at the State Convention in Johnstown.

Tioga.—A joint meeting of the Tioga, Potter, and Lycoming County Medical Societies and their auxiliaries was held July 8, at the Hunting Valley Inn, Gaines, in Tioga County. The meeting was preceded by a midday dinner. A program of entertainment was given by a quartet from Blossburg and by Dr. Gordiner, of Montgomery. Scientific talks were given by Dr. Donald Guthrie, of Sayre; Dr. Loyd Cole, of Blossburg; Dr. J. Allen Jackson, of Dansville; and Dr. Walter S. Brenholtz and Dr. John A. Campbell, of Williamsport.

Westmoreland.—On July 2, at the Pleasant Valley Country Club, near Scottdale, the auxiliary entertained for their husbands and families.

Golf, bridge, and motoring were enjoyed during the afternoon and at 4.30 p. m. dinner was served. Covers were placed for 60.

Dr. William Taylor, of Irwin, thanked the members for the pleasant time enjoyed and then introduced Dr. Robert C. Johnston, of New Kensington, president of the County Medical Society.

The members were glad to greet and welcome Mrs. Johnston and Mrs. Allison, of New Kensington.

Mrs. C. D. Ambrose, of Ligonier, has invited the members to be her guests at the opening meeting in September.

Medical News

Deaths

Mrs. Critchfield, wife of Dr. John B. Critchfield, of Lock Haven; recently.

Thomas Curry, M.D., of Philadelphia; Jefferson Medical College, 1890; June 2.

Mrs. Opal M. Houck, wife of Dr. William S. Houck, of Harrisburg; June 29.

George E. Day, M.D., of Strasburg; Jefferson Medical College, 1884; aged 68; July 9.

William Peacock, M.D., of Mt. Laurel, N. J., formerly of Philadelphia; aged 71; June 25.

Mrs. Mary Wharton Mendelson, wife of Dr. Walter Mendelson, of Philadelphia; July 7.

Mrs. Caroline Massman Loeb, wife of Dr. Victor A. Loeb, of Philadelphia; aged 53; July 17.

Frank Reed Sallade, M.D., of Womelsdorf; Jefferson Medical College, 1893; aged 61; May 15.

Gottfried Arn, M.D., of Pittsburgh; University of Pittsburgh School of Medicine, 1895; aged 63; July 11.

ERNEST J. COWDEN, M.D., of North Warren; University of Buffalo School of Medicine, 1882; aged 72; June 11.

CHARLES H. BEEBE, M.D., of Philadelphia; Hahnemann Medical College, Philadelphia, 1881; aged 69; July 1.

JAMES M. JOHNSTON, M.D., of Huntingdon; College of Physicians and Surgeons, Baltimore, 1896; aged 68; May 5.

DAVID M. SAMPSELL, M.D., of Winfield; College of Physicians and Surgeons, Baltimore, 1884; aged 75; recently.

HENRY E. PORTER, M.D., of Coatesville; Hahnemann Medical College, 1902; aged 54; June 18, at Somers Point, N. J.

EARL L. BREWER, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1922; aged 35; June 10.

HARRY L. SICKEL, M.D., of Woodbury, N. J., formerly of Philadelphia; Kentucky School of Medicine, 1894; aged 61; April 14.

JEREMIAH FRANCIS MCAVOY, M.D., of Catassauqua; University of Pennsylvania School of Medicine, 1903; aged 56; July 8.

HENRY G. BRUNER, M.D., of Philadelphia; Jefferson Medical College, 1884; aged 68; June 25. Dr. Bruner was taken ill while driving to the shore and died suddenly in the Cooper Hospital, Camden, N. J.

WYLIE D. WOODRUFF, M.D., Portland, Ore.; University of Pennsylvania, 1896; aged 64; in June. Dr. Woodruff was well known in this State on account of his athletic prowess, more especially in football, track, and rowing. He began his professional work in the west, and in 1917 returned to Philadelphia, where he opened an office, but later went to Portland.

JAMES W. KEATH, M.D., known as "Smiling Jim," of Ephrata; Jefferson Medical College, 1915; aged 41; June 24. Despite the fact that in 1915 both legs were amputated as a result of injuries suffered in an accident, Dr. Keath came to Ephrata, and with a wheel chair as his means of locomotion, built up a large practice as an eye, ear, nose, and throat specialist.

SIR ARTHUR CONAN DOYLE, London, Eng.; aged 71; suddenly, July 7; physician, novelist, and spiritual leader, creator of the world-famous Sherlock Holmes, detective par excellence. Although having cardiac disease his weakened condition was thought to have been brought on by his series of lectures last October in Scandinavia, in behalf of the cause of spiritualism. After the dawn of this century he exerted his literary powers in placing before Europe the facts of the Boer War based upon his experience as a surgeon in that conflict, and for this he was made a knight of the realm. Although Sir Arthur announced his retirement from writing when he was 60, to devote the remainder of his life to the study and expounding of spiritualism, he was forced to revive the character of Holmes in later years. He visited America four times on lecture tours. The best of his works have often been compared with similar productions of Edgar Allen Poe, who cut the pattern for modern detective fiction.

Births

TO DR. AND MRS. HAROLD C. KISTLER, of Ardmore, a daughter, June 16.

TO DR. AND MRS. RICHARD F. GERLACH, of Philadelphia, a daughter, Sarah Lane Gerlach, July 13.

TO DR. AND MRS. JOSEPH T. BEARDWOOD, JR., of Melrose Park, a daughter, Deborah Beardwood, recently.

Engagements

MISS EDITH NEFF, daughter of Dr. and Mrs. Joseph Neff, of Philadelphia, and Mr. R. Raymond Kay, of New York.

MISS ELLANOR DAWSON and Mr. Hayward Goldsborough Brown, son of Dr. and Mrs. Henry H. Brown, all of Philadelphia.

MISS HELEN POOR HOFFMAN, daughter of Dr. and Mrs. Ramine C. Hoffman, of Narberth, and Mr. Carl Stephens Vogel, of York.

Marriages

MISS ANNABELLE BROBST to Dr. Paul L. Ridall, both of Philadelphia, July 16.

MISS MARGARET E. RYAN to Dr. B. J. McCloskey, both of Johnstown, June 23.

MISS RUTH SNELL, of Ralston, to Dr. James T. Taylor, of Drexel Hill, June 2.

MISS WINIFRED OLMSTED MOORE to Dr. Robert Smith Bookhammer, both of Philadelphia, July 19.

MISS ANNA P. CAMPBELL, of Martinsburg, Pa., to Dr. Astley P. C. Ashhurst, of Philadelphia, July 16.

MISS CARLYN JANET MANASSES, daughter of Dr. and Mrs. Jacob L. Manasses, to Dr. Louis Tuft, all of Philadelphia, July 1.

MISS MARGARET R. GALLAGHER, of Hazleton, to Dr. Guy A. Robinhold, assistant surgeon at the Ashland State Hospital, recently.

MISS ELIZABETH EMMALINE GARRETT to Dr. Harry Sands Weaver, Jr., son of Dr. Harry Sands Weaver, all of Philadelphia, July 19.

MISS THEODORA AGNES LINN, of Cynwyd, to Mr. Nelson Carter Wilbur, son of Dr. and Mrs. Bertrand K. Wilbur, of Haverford, July 22.

MISS MARIAN E. TOPPER, of McSherrystown, to Dr. Allen G. Brackbill, intern at the Woman's Homeopathic Hospital, Philadelphia, recently.

MISS HELEN BILLARD CALHOUN, daughter of Mr. and Mrs. John James Calhoun, Greenwich, Conn., to Dr. Henry O. Reik, of Atlantic City, N. J., editor of the *Journal of the New Jersey State Medical Society*.

Miscellaneous

DR. HARRY A. VOSBERG, of Dubois, is in Chicago taking special work in pediatrics.

DR. AND MRS. OLIN G. A. BARKER, of Johnstown, left for a tour of northern Europe, to be gone about ten weeks.

DR. F. E. WEDDIGEN, of Williamsport, recently took a special course in tumor histology at Johns Hopkins University.

DR. AND MRS. W. J. SCANLAN and daughter, of Shenandoah, sailed June 3 for a tour of Europe, Egypt, and Palestine.

DR. ROSS V. PATTERSON, president-elect of our State Medical Society, sailed for Europe, July 8, to return by September 2.

DR. IRA E. SLOAN, of Johnstown, sailed for Europe, July 3, where he will attend the medical clinics in London, Paris, and Berlin.

DR. JOHN B. MCANENY, of Johnstown, had the honorary degree of LL.D. conferred on him by the St. Francis College at Loretta, Pa.

DR. R. TAIT MCKENZIE, noted sculptor, has resigned as head of the department of physical education at the University of Pennsylvania.

GETTYSBURG COLLEGE has conferred the honorary degree of LL.D. on Dr. James Torrance Rugh, professor of orthopedic surgery in Jefferson Medical College.

The dedication exercises of the research laboratories of the Skin and Cancer Hospital, Philadelphia, were held June 18 at the hospital building.

Dr. Charles E. Lehman, of Williamsport, who underwent a serious operation recently, has sufficiently recovered that he has been removed to his home.

Dr. and Mrs. James G. Koshland, of Lewistown, will sail for Vienna, August 14, where Dr. Koshland will pursue postgraduate work for two months.

Dr. Arthur C. Morgan, of Philadelphia, delivered the address at the commencement exercises, June 5, of the Green-Dreher Vocational Community School, Newfoundland, Pa.

The residuary estate of Dr. William Curran, of Philadelphia, who died in 1880, and estimated at more than $1,000,000, will be given to Beaver College, Glenside, Pa.

Dr. and Mrs. Maurice S. Jacobs, of Philadelphia, sailed June 27 for Europe on the *Majestic*. Dr. Jacobs will pursue postgraduate studies in internal medicine and cardiology in Vienna.

The Son of Dr. Arthur L. MacKenzie, of Eddington, sustained a fractured skull and internal injuries while participating in an automobile race at Detroit, Mich., June 8; his mechanic was killed.

Dr. J. Gurney Taylor, of Milwaukee, Wisconsin, a former active member of the Philadelphia County Medical Society, has recently been elected to membership on the National Board of Medical Examiners.

At the annual convention of the American Therapeutic Society, held in Detroit in June, Dr. Clement R. Jones, of Pittsburgh, was elected president, and Dr. Truman G. Schnabel, of Philadelphia, was elected treasurer.

Dr. and Mrs. Eugene L. Opie, of Philadelphia, have sailed for Europe to attend the International Tuberculosis Conference in Norway, Dr. Opie being the representative of the United States Government and of the Rockefeller Foundation.

Dr. William E. Hughes and his daughter, Esther, of Philadelphia, are on their way to Honolulu, where Dr. Hughes' daughter, Mrs. Earl C. Metz, wife of Commander E. C. Metz, of the submarine base at Pearl Harbor, is seriously ill with typhoid fever.

It is averred that a Utah physician has declared tobacco roughens a woman's voice (it is not stated whether smoking or chawing terbaccy), and tobacco smoking was causing women to become hairy. We wonder how he explains the latter condition in years gone by.

The following appointments have been made on the major staff of the Jewish Hospital, Philadelphia: genito-urinary, Dr. John B. Lownes; obstetrical, Drs. Camille J. Stamm and Jacob Walker; and pediatrics, Drs. Samuel Goldberg and Arthur M. Dannenberg.

All but $5000 of the $33,000 estate of the late Dr. Charles H. Beebe, of Philadelphia, is bequeathed to the Pennsylvania Grand Lodge of the Masonic Order and Hahnemann Hospital. Bequests of $5000 each were made to the hospital in memory of the testator's mother and his brother.

P. C. Kullman & Co., 110-116 Nassau St., New York City, have recently compiled a copyrighted folder, *The 92 Elements*, which gives their names, symbols, atomic weights, melting points, numbers, and years of discovery. Trade and scientific publications speak highly of this folder, and copies of it may be obtained gratis by application to the publisher.

After twenty-seven years' service as a police and fire surgeon, Dr. Frank Bacon Hancock, of Philadelphia, retired July 8 from active duty and was presented with a gold medal by Director of Public Safety Schofield. Dr. Hancock was made an honorary police surgeon and warmly thanked for his long service to the city.

Dr. H. H. Holderman, surgeon-in-chief of the Locust Mountain State Hospital, was granted a two months' leave of absence by the Board of Trustees of that institution. He, with his wife and son, has gone to Europe. Primarily, the trip will afford Dr. Holderman an opportunity for an intensive survey of the hospital situation in Europe.

The meeting of the International Assembly of the Inter-State Postgraduate Medical Association of North America, to be held at the Municipal Auditorium, Minneapolis, Minn., October 20 to 24, 1930, will be addressed by many distinguished guests, representing various medical colleges of the United States and Canada.

The Luzerne County Medical Society, Pennsylvania, has an annual custom worthy of emulation. An annual memorial service is held in memory of its members who passed away the preceding year. The memorial service was held Sunday, May 18, at the Pine Street Methodist church, Williamsport, and was attended by members of the Society, the Woman's Auxiliary, and the widows of the deceased members.

Citizenship rights were restored in New York, June 11, to Mrs. Mary Noguchi, widow of Dr. Hideyo Noguchi, Japanese physician and scientist, in naturalization proceedings in Federal court. Mrs. Noguchi, who is 54, was born in Dunsmore, Pa., but lost her American citizenship when she married Dr. Noguchi. Her husband died in May, 1928, in Africa, a victim of the tropical fever he was attempting to stamp out among the natives.

Promoters of twelve fraudulent medical mail-order schemes ceased operation in the last three months of 1929, as a result of the coöperative efforts of the Federal Post Office Department and the United States Department of Agriculture. In three cases fraud orders were issued denying the firms or individuals concerned the use of the mails. In another case the scheme itself was ruled out of the mails, and in five cases the firms filed agreements to discontinue business.

Dr. Charles Harrod Vinton, the oldest life member of the Philadelphia County Medical Society, recently made a contribution sufficient to bring to completion the presentation of the Pasteur portrait to the society. It was recently proposed by Dr. William D. Robinson that an oil portrait of Louis Pasteur be painted and given to the society. The cost was to come from the proceeds of small portraits of the great scientist. The raising of this fund was incomplete until Dr. Vinton made his gift.

During the fiscal year of the National Home for Lepers, maintained by the U. S. Public Health Service at Carville, La., forty-nine new patients were admitted and nineteen patients were released as no longer a menace to public health. The institution handles an average of 300 patients during the year. Chaulmoogra oil by mouth and hypodermic injections of a special derivative of this oil were used as a routine treatment in some of the patients. Supplementary treatment by physiotherapy and special light treatments were also given.

Dr. LeRoy Edgar Chapman, now serving his second term as burgess of Warren Borough, after having filled most acceptably the office of coroner of Warren County for twelve years, and held other less important township offices, is destined to represent the forty-eighth senatorial district in the Senate at Harrisburg when the next session convenes in January. Running on a platform advocating more home rule for municipalities and less centralization of power at the State Capital, Dr. Chapman defeated the incumbent, Dr. H. H. Hamb, of Rouseville, Venango County, for the Republican nomination. He also secured the Democratic nomination.

THE FIFTH COUNCILOR DISTRICT OF THE Medical Society of the State of Pennsylvania, comprising Fulton, Adams, York, Franklin, and Cumberland Counties, held their annual meeting at Piney Mountain Inn, July 17, at which time Dr. Edgar A. Miller, of Gettysburg, was elected president, succeeding Dr. F. G. Wright, of Chambersburg. Approximately 100 physicians attended the sessions. Dr. Harold L. Foss, of Danville, was the principal speaker and spoke on "Surgical Treatment of Hypertrophy of the Prostate Gland." Dr. Clarence R. Phillips, of Harrisburg, State councilor, also addressed the meeting.

PHYSICIANS WHO ARE PARTIAL to the use of lactic acid milk in infant feeding are finding Dextri-Maltose, manufactured by the Mead Johnson & Company, the carbohydrate of choice. To begin with, Dextri-Maltose is a bacteriologically clean product, unattractive to flies, dirt, etc. It is dry, and easy to measure accurately. Moreover, Dextri-Maltose is prepared primarily for infant feeding purposes by a natural diastatic action. Finally, Dextri-Maltose is never advertised to the public but only to the physician, to be prescribed by him according to the individual requirements of each baby.

ON JUNE 11, a little less than a week before the first anniversary of Hoffmann-La Roche, Inc., in their new home at Nutley, N. J., ground was broken for two new buildings. Further details are not yet available, but the expansion at this time is convincing evidence of the faith which the profession puts in Roche "medicines of rare quality."

The pictures in the Roche advertisement in this issue on page III attempt to reveal only a few of the interesting sights to be seen by any physician who visits these ultra-modern scientific laboratories in Nutley. If you did not receive a copy of *The Doctor Visits Roche*, write to the Roche Scientific Department for this interesting booklet.

THE QUESTION WHETHER A MARRIED WOMAN, who performs services for her husband other than housework, is entitled to collect pay in cash for this extra work, or whether such service is to be considered as part of the widespread duties of a wife, is the basis of a legal action in Queens City Court, N. Y. Mrs. Virginia Whitestone, a registered nurse, received several months ago a legal separation from her husband, Dr. Liston Paine, of Flushing. Now she is suing her husband for $3000, for "specific performance." Mrs. Paine alleged that for three years she assisted her husband in his office, in addition to her regular duties as a wife and homemaker, and that her husband promised her $25 a week, which he never paid her.

AFTER MANY YEARS OF EXPERIMENTATION in the laboratories, E. R. Squibb & Sons, manufacturers of Pharmaceutical products, has announced a new antiseptic. Clinical authorities have tested the new antiseptic and, it is said, declare it has several advantages that hospitals and physicians have been seeking for years. It is Di-Phen, is nonpoisonous even when swallowed, yet in full strength it kills germs instantly on contact, being 3 times as strong as carbolic acid. It has a phenol coefficient of 3.0. It is claimed not to injure fabrics or instruments, not to stain agate or metal utensils, and not to be corrosive. It does not have the characteristic disagreeable odor of phenols and cresols.

THE FIRST MEETING OF THE Tri-County Medical Meetings which are composed of Clearfield, Indiana, and Jefferson Counties was held at Indiana on June 12, under the direction of the Indiana County Society. The dinner was served at the Indiana Country Club, and the program was put on at the Indiana Theater because of better facilities for showing the lantern slides. There were sixty-seven members and guests present. Dr. James A. Dickson, of Cleveland, read a paper on "Low Back Conditions." "Early Diagnosis of Cancer" was the subject of Dr. A. J. Bruecken's paper. "Significance of X-Ray Interpretation of the Chest," by Dr. George C. Grier, of Pittsburgh, and Dr. William H. Mayer, of Pittsburgh, had a paper on "The Nervous Patient from the Standpoint of the General Practitioner."

ON JUNE 6 THE RESIGNATION OF Dr. Martin W. Barr, as chief physician to the Elwyn Training School, Elwyn, was accepted by the Board of Directors. Dr. Barr retires to private life after forty-six years' active service with the mentally deficient.

Dr. Barr was appointed assistant physician at Elwyn under the late Dr. Isaac Kerlin, in 1884. On the death of Dr. Kerlin, in 1893, Dr. Barr was appointed as his successor. His writings on subjects relative to the care and treatment of the mentally weak have made him an international authority. He has been called to lecture on the subject of "The Mentally Deficient" in England, France, Italy, Japan, and China. In his retirement, those interested in the study of the mentally deficient lose a valuable leader and an ardent coworker.

THE INSTITUTE FOR CHILD GUIDANCE has offered six one-year fellowships to qualified psychiatrists desiring to enter the child guidance field, three to be available in the spring and three in the fall. Applicants must possess an M.D. degree from a class-A medical school and be adequately grounded in the fundamentals of psychiatry. Stipends of $2500 are awarded. The institute also announced three one-year fellowships to properly qualified psychologists who have a thorough grounding in the fundamentals of psychology, who have mastered the technic of mental testing, and who have at least a master's degree. The stipend is $1500 a year. The studies to be taken up will be a coöperative enterprise between psychiatry, psychology, social service, and general medicine. Further information may be secured from Dr. Lawson G. Lowrey, director, 145 East 57th Street, New York City.

THE FOLLOWING PHILADELPHIANS are now touring Europe: Dr. and Mrs. B. Alexander Randall, Dr. Herbert B. Carpenter and his sister, Dr. Jacob Wallen, Dr. Herman L. Weiner, Dr. and Mrs. Fielding Otis Lewis, Dr. and Mrs. Emory G. Alexander, Dr. H. Marian Hunsicker, Dr. and Mrs. Louis P. Reimann, Dr. and Mrs. John P. Emich, Dr. and Mrs. John T. Farrell, Jr., Dr. and Mrs. David Riesman, Dr. and Mrs. Albert J. Britt, Dr. and Mrs. G. Oram Ring, Dr. and Mrs. P. Brooke Bland, Dr. and Mrs. Lawrence Goldbacher, Dr. and Mrs. Morris Segal, Dr. and Mrs. Geo. W. Sholler, Dr. and Mrs. E. R. Clark, Dr. and Mrs. E. Paul Reiff, Dr. A. C. Wood, Dr. and Mrs. David D. Custer, Dr. Jay F. Schamberg, Dr. and Mrs. Horace F. Ewing, Dr. and Mrs. David N. Kremer, Dr. and Mrs. Samuel Eglick, Dr. Horace J. Williams, Dr. David N. Husik, Dr. and Mrs. John H. Stokes, Dr. W. A. Weaver, and Dr. and Mrs. Donald M. Pillsbury.

DR. G. B. WOODS, of Washington, Pa., has had the following record of professional service which he thinks will be hard to beat: "There are two families in Washington which I have served as family physician through five generations. I have attended the great-grandparents, the grandparents, the parents, the children, and lastly, the children's children. In one of these families there are five sons and two daughters, all married, and have children. In one family there are eleven children; in another, ten; in the third, six; in the fourth, six; in the fifth, one; in the sixth, two; and in the seventh, two, making thirty-eight children in all. All of these grandchildren, with the exception of two, are living and I officiated at the birth of all but two of them. I have been wondering if there is any other physician in active practice who can equal that record of service through five generations of two families."

DENTAL EDUCATION IN THE UNITED STATES began in the winter of 1840-1841, when the Baltimore College of Dental Surgery was opened with five students in a

(Continued on page xviii.)

In 3-ounce and 12-ounce bottles

• Rapid germicidal action . . . . . without tissue injury, stain or odor

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MEDICAL NEWS

(Continued from page 804.)

small room at Hopkins Place near Baltimore Street, according to an account by Stanton Tiernan in *Hygeia*. Two students were graduated in 1841 and in 1851 eighteen received diplomas. The Baltimore College of Dental Surgery was founded by Horace H. Hayden, who started in life as an architect, but who was so impressed with the skill of a dentist who relieved him of a severe toothache that he took up dentistry at the age of thirty-one. It was not till forty years later, however, that he saw the founding of the school, which from the beginning has exerted a strong influence on the progress of dentistry. Recently a new building was dedicated for the oldest dental college and a tablet was erected by the Maryland State Dental Association marking the original site of the college. It has been affiliated with the University of Maryland since 1923.

Establishment of a department for the "study of evil" with Mrs. Corra Harris, the novelist, as instructor, has been announced by Dr. Hamilton Holt, president of Rollins College, Florida. The course, Dr. Holt said, will not take up the practice of evil but rather the history and philosophy of it as compared to virtue, and it is likely that the effects of evil on history and life will be discussed. Evil is one of the oldest classics of human nature, and it is usually taught by people morally illiterate and mentally corrupt when it should be an important part of the education of youth, taught as a classic, carefully analyzed and defined with reference to preparing adolescent people for dealing intelligently rather than emotionally or weakly with instincts not merely of the body, but of the mind. The sophisticated youngster proves that he is unsophisticated by his insistence that he is sophisticated. A young man who is really wicked takes an entirely different attitude. He pretends to the best of his ability that he is innocent and to be found out is the last thing he wants to happen.

On June 12, in Milwaukee, a vast audience in attendance on the national biennial nursing convention (American Nurses' Association, The National League of Nursing Education, and the National Organization for Public Health Nursing) expectantly awaited an announcement of the first award of the Walter Burns Saunders medal to the nurse who, during the year just past, had rendered the greatest service to her profession and to the sick of this country.

A committee of leaders in the nursing profession had been endeavoring for months to decide wisely as to the most deserving recipient of this honor. Nor was the attention of the group focused entirely on those who labored in great urban institutions of healing, for as fine a brand of heroism is frequently found amongst nurses who work in isolated communities where equipment is meager and justifiable discouragement is constantly to be combated. Difficult indeed must have been the task of the committee of award. And yet, there was one name which seemed to stand apart from all others. She it was who for several decades had placed the claims of the patient above any others. She had certainly subordinated self and elevated service. She had literally given her life in the cause of improving the care of the patients in a great city hospital. In awarding this medal posthumously to S. Lillian Clayton, of Philadelphia, the donor and the committee of this award acted as would have the whole nursing field had its members been given the opportunity of voting as to its recipient. Miss Clayton exemplified the finest traditions of nursing and this recognition of her service cannot but spur young nurses everywhere to emulate her.

The presentation was made by Dr. Joseph C. Doane, Philadelphia, and the acceptance in behalf of Miss Clayton's school was by Constance White, president of the

(Concluded on page xx.)

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The experience of many years has demonstrated the great value of lactic cultures in the various intestinal infections of infancy.

B. B. CULTURE and BACILLUS ACIDOPHILUS CULTURE (B. A. CULTURE) are available for your prescription at our conveniently located depository stores throughout the State. Their value in these cases is well known.

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The Reasons Are Self-Evident

1. The potency of vaccine is better when propagated during cool weather.
2. Vaccine stands shipment better during cool weather—Remember—Heat Kills Vaccine!
3. Higher percentage of takes, which means greater protection against small-pox.
4. Less sore arms and legs; children particularly do not expose the vaccination wound to infection to the same extent during the winter as during the summer months.
5. Physicians should be impressed with the importance of vaccinating during infancy and above all to vaccinate the pre-school child during cool weather.

Most vaccinating is performed during August, or the first week of September, before the child enters his first term at school. This is the exact period of the year when both heat and humidity are the very highest and in consequence the potency of the vaccine is the lowest.

While exercising every care we cannot control temperature. Remember the slogan "Heat Kills Vaccine"; therefore, vaccinate during cool weather.

National Small-Pox Vaccine can be depended upon to give maximum protection with minimum reactions if proper technic is practiced. We suggest Leake's multiple dermal puncture method of vaccinating as endorsed by the U. S. Hygienic Laboratory. **Avoid Use of Shields!**

To prove the quality of National Vaccine and the immunizing value of Diphtheria Toxoid fill in the enclosed coupon.

Mail Small-Pox Vaccine and Dip. Toxoid per adv. in Pa. Med. Jour.

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MEDICAL NEWS

(Concluded from page xviii.)

student council of the school of nursing of the Philadelphia General Hospital.

FAR-REACHING STRIDES IN THE DEVELOPMENT AND application of x-ray and electro-medical apparatus are foreshadowed by the Westinghouse Electric and Manufacturing Company's announcement that it has entered the x-ray field through a newly organized $2,000,000 company known as the Westinghouse X-Ray Company, Inc.

Two of the largest companies now engaged in the x-ray field, the Wappler Electric Company, Long Island City, New York, and the American X-Ray Corporation, Chicago, will become identified with this organization.

Under these new arrangements, the new Westinghouse X-Ray Company, Inc., will have the resources of the Westinghouse research laboratories together with its engineering and manufacturing organization which, it is felt, will help in the improvement and development of practical apparatus, thus giving to the medical profession, and through them to the public, the many benefits and advantages of the discoveries made by Westinghouse scientists and research engineers.

The Wappler Company is well-known in the medical and hospital world for its valve tube rectifier x-ray generators, and the so-called radio knife for bloodless surgery, having been the pioneer in the development of both these types of equipments. Its products and those of the American Company also include a complete line of x-ray accessories and other equipments, of every type in which electricity is utilized for medical diagnosis and treatment.

BOOK REVIEWS

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

THE SURGICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month.) Volume 10. No. 2. (Chicago Number—April, 1930.) 252 pages with 72 illustrations. Per clinic year (February, 1930 to December, 1930.) Paper, $12; cloth, $16. Philadelphia and London. W. B. Saunders Company.

Another fund of knowledge has appeared in this issue. It is most difficult to single out any one clinic because they are all meritorius. This number is of considerable value to the surgeon and even the internist may derive much desirable information.

THE COLLECTED PAPERS OF THE MAYO CLINIC AND THE MAYO FOUNDATION FOR 1929, Volume XXI. Edited by Mrs. M. H. Mellish, Richard M. Hewitt, M.D., and Mildred A. Felker, B.S. Octavo volume of 1197 pages with 279 illustrations. Philadelphia and London: W. B. Saunders Company, 1930. Cloth, $13 net.

This volume maintains the high standard of the Mayo publications. The splendid bibliography and cross index makes it very convenient for quick use. Contributions from the junior members of the staff afford proper recognition of meritorious work performed with the encouragement it offers to this group of workers to do even better work. The book is heartily recommended as offering subjects of diversified interest for the specialist and the general practitioner.

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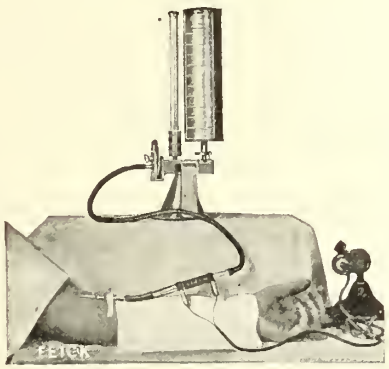

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Described in J.A.M.A., Aug. 18, 1928, p. 471.

Ask for descriptive folder and reprints; also pamphlet "Directions for Preparation and Use of Dextrose (Glucose) Solutions for Intravenous Use."

See this apparatus at the October meeting—Booth No. 25

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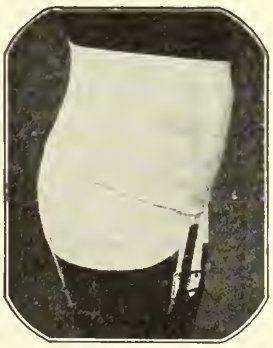

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Safety for Child Is Aim of Drive

A small army of workers is on the alert this summer to save children from injury or death in the streets of Philadelphia. The problems of child safety become especially acute when nearly half a million of children poured out from the city schools for the summer vacation.

The Automobile Club of Philadelphia emphasized its "Watch the Children" safety campaign and is coöperating with the police and numerous organizations. In order to reduce accidents, the club inaugurated a safety campaign to urge upon motorists the necessity for greater care in driving in the summer months. In July, last year, the club's figures show there were 553 motor accidents in which children were injured. In the same month, 14 children were killed in automobile accidents; and in June, 11 met death.

The Keystone Automobile Club also has formed plans for safeguarding children during the summer months. Safety squads were organized in the city's playgrounds and recreation centers as soon as the schools closed. This is the first time in the history of the city that an organized campaign for child safety has been attempted during the vacation period. Heretofore active safety work has ceased with the closing of the school term, with increasingly disastrous results to Philadelphia children.

The Playgrounds' Association is among others coöperating in guarding the youngsters and its slogan, "Keep Out of the Streets, Play in the Playgrounds," is being spread over the city. To further emphasize this idea, there is emblazoned on the north and south entrances of City Hall this reminder: "150 Playgrounds Now Open. Safe for Children." In trolley cars is a placard declaring "Hot Weather—Play the Safest Way."

The Citizens' Safety Bureau of the Philadelphia Chamber of Commerce also is coöperating in making the youngsters interested in playgrounds.

For Sale.—New eleven-room frame house with offices, electricity, hot-water heat, hard-wood floors; double heated garage; 700 population, excellent surrounding community, cement highway; practice unopposed, radius ten miles. Intend specializing. Address Dept. 649, PENNSYLVANIA MEDICAL JOURNAL.

For Sale.—Physician's residence and offices; established practice; selling on account of death. Location, rolling country, southeastern Pennsylvania. Address Dept. 647, PENNSYLVANIA MEDICAL JOURNAL.

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For Sale or Rent.—Physician's office, equipment, and residence, in Indiana County, Pa. Excellent field for doctor seeking a location. For particulars, address FARMERS BANK & TRUST CO., Executor, Indiana, Pa.

For Rent or Sale.—New, modern ten-room house and office combined. Not a country practice; in town of 6,000. Only fifty miles from Harrisburg. Intend specializing. Address Dept. 640, PENNSYLVANIA MEDICAL JOURNAL.

Speeches, Papers.—Special articles and other literary or medical work promptly prepared on your required topics. Manuscripts also revised. All correspondence confidential. Authors Research Bureau, 500 Fifth Ave., New York.

For Rent.—Physician's offices (private entrance and exit) and residence. All improvements. Double garage. Established practice of twenty-three years, southeastern Pennsylvania. Yearly collections, $10,000 to $15,000. Renting on account of death of former physician. Address Dept. 646, PENNSYLVANIA MEDICAL JOURNAL.

Wanted—Patient.—Graduate nurse, wife of practicing physician, will care for suitable female patient suffering from mild mental or nervous condition, in her own home in suburb of Pittsburgh. Spacious grounds, healthful location, experienced medical attention; first-class in all respects; references; investigation invited. Address Dept. 641, PENNSYLVANIA MEDICAL JOURNAL.

Situations Wanted.—Salaried appointments for Class-A physicians in all branches of the medical profession. Let us put you in touch with the best man for your opening. Our nation-wide connections enable us to give superior service. AZNOE'S NATIONAL PHYSICIAN'S EXCHANGE, 30 North Michigan, Chicago. Established 1896. Member The Chicago Association of Commerce.

For Sale.—Eight-room frame dwelling with two-room office attached and two-car garage, lot 72' x 120', on a prominent corner in one of Pennsylvania's largest cities, which has been occupied by the present owner for thirty-five years, doing general practice. Owner desires to retire and will sell for actual value of real estate, and will thoroughly introduce buyer. Easy terms can be arranged. Address Dept. 643, PENNSYLVANIA MEDICAL JOURNAL.

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Johnstown and the Eightieth Annual Session

Location

Johnstown, the city in which the Medical Society of the State of Pennsylvania is soon to hold its Eightieth Annual Session, is, we think, a most attractive and convenient location, easily reached from all sections of the State, as many good roads from the east, west, north, and south afford facilities for reaching this city. Prominent among the highways that offer attractive transportation are the Lincoln and William Penn. Situated midway between these highways with their numerous intersections—at Bedford, Reels Corner, Stoystown, Jenner Cross Roads, and Ligonier on the Lincoln, and Armagh, Mundays Corner, and Cresson on the William Penn—Johnstown is easily reached from all sections.

Cambria County, of which Johnstown is the metropolis, contains a considerable part of the mileage of good roads for which Pennsylvania is famed. Traversed east and west by the William Penn Highway, and crossed and recrossed from the north and south with paved roads connecting with the Lincoln Highway, it may be stated that Cambria County is practically "on Broadway." These roads, linking the towns of Cresson, Loretta, Ebensburg, Carrolltown, Barnesboro, Spangler, Patton, and Hastings offer the traveler a wealth of scenic beauty—hills, dales, and plateaus, which must be seen to be appreciated.

The main line of the Pennsylvania Railroad offers excellent transportation service from east and west with good connections from northern points; likewise does the Baltimore and Ohio from the south. For those inclined to travel by air, Johnstown offers an excellent landing field and planes with experienced pilots available at all times.

HOTEL HEADQUARTERS
The Fort Stanwix Hotel, immediately adjoining the State Theater, Session Headquarters

History

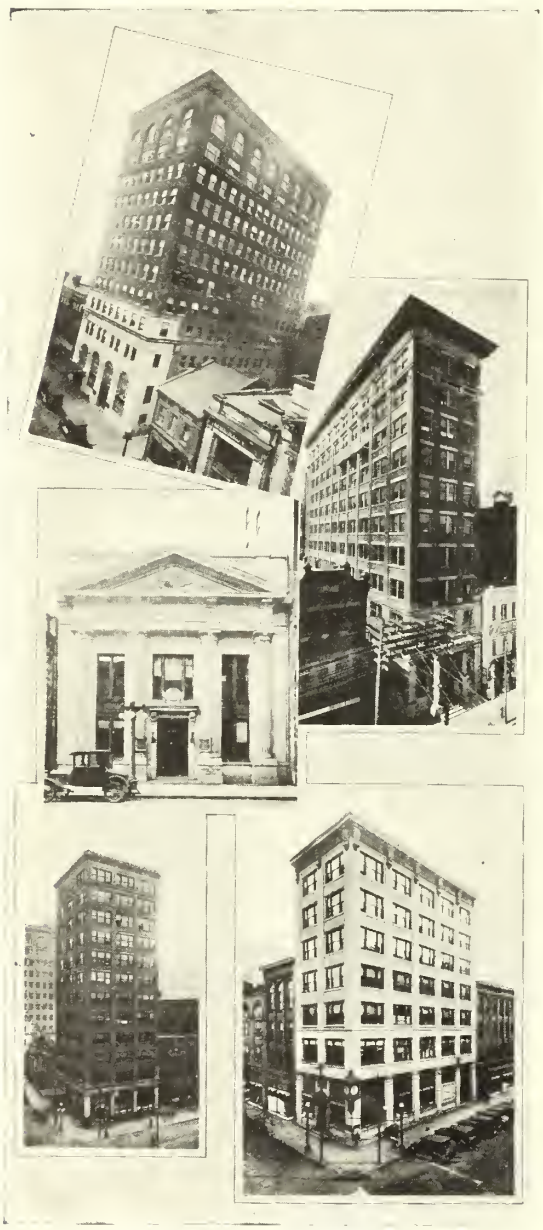
Johnstown, a city of historic interest, was first settled in 1793 by Joseph Johns on the site of an Indian village, peopled by Shawnese and Delaware tribes and located at the junction of Stoneycreek and Conemaugh Rivers. Earlier, the site of Johnstown had been visited by two white men, Indian traders, who made no settlement there. History records their names as Jonah Davenport and James LeTort and the date, 1731.

Cambria County was formed from Somerset and Huntingdon Counties in 1804. The first white man to establish residence in the present county was Captain Michael McGuire, an officer in the Revolutionary Army.

In 1816, the town Loretto was planned and named for the city of Loretto in Italy. It was here that Father Demetrius Gallitzin, who prior to his ordination had been a Russian nobleman, began his service of self-sacrifice and ministry to the early settlers. After a period of forty-one years of noble service in the interests of humanity, he died as he had lived, humble and poor. Father Gallitzin's name is revered by all who have knowledge of his unselfish work. This good priest's remains rest near the chapel at Loretto and

his grave is marked by a bronze statue, the gift of Mr. Charles M. Schwab.

The original plan of Johnstown was filed at Somerset, in 1800, and was known as Johns Town. This town became the center of progress of this mountain country. In 1832, a canal connecting with and completing a water-and-rail



BANKS OF JOHNSTOWN

transportation system, extending from the Schuylkill River in Philadelphia to Pittsburgh on the Ohio was put into operation. Johnstown was an important point in this system and a large loading basin with feeder dams and portages was located within the present city limits. It also marked the western terminus of the rail and inclined planes located on the heavy mountain grade of the Alleghenies. This water-and-rail system was supplanted by a steam railway in 1863, the Pennsylvania Railroad Company having obtained the property and right of way, the present main line from New York to Chicago.

Industries

In 1840, the steel industry, first as an iron works, was founded by George S. King. In 1842, the first blast furnace was blown in, followed by rolling mills, merchant steel, and wire mills, car shops, etc., the products of which were and are given world-wide distribution. The original Cambria Iron Company was followed in order by the Cambria Steel Company, the Midvale Steel and Ordnance Company, and is now the Cambria plant of the great Bethlehem Steel Corporation, organized by Charles M. Schwab, who was born and still resides in Cambria County. It was here that steel was first made by the pneumatic process, later known as the Bessemer process, the result of experiments and work of William Kelley, and the first converter built in America can yet be seen at the Bethlehem Steel Company's general office on Locust Street. The steel plants of this company are among the most modern in the world of the steel manufacturing industries. Everything from nails to armor plate has been the output of these mammoth mills.

The Loraine Steel Company, a subsidiary branch of the United States Steel Corporation, operates a huge plant in Johnstown, with an output of foundry and machine products, railway switches, and car-builder's steel.

Other industries in Johnstown represent the manufacture of steam and hot-water radiators, boilers, mine cars, steel furniture, stoves, furnaces, trucks, brass, fire brick, builder's brick, cement products, lumber, buttons, playing cards, silk, boxes, men's clothing, and candy. Johnstown is also noted as the hub of the bituminous coal district and for the generation of electric power.

Johnstown's financial stability is indicated by its bank deposits of $50,000,000; its 16,000 homes of a metropolitan population of 105,000; its many fine churches; and a school system second to none in the great Commonwealth of Pennsylvania. The new Garfield and Cochran Junior High School Buildings are the latest word in modern school facilities. The University of Pittsburgh maintains its Junior College in Johnstown.

The Johnstown Flood

Johnstown is noted for its ample and safe water supply. Perhaps there is no state of the

Union in which the words, "The Johnstown Flood," do not bring to mind Johnstown's well-remembered calamity, a prominent event of the far-away past, to which I somewhat hesitate to allude. During a severe spring freshet, May 31, 1889, a large artificial lake, located on the Conemaugh River, fourteen miles northeast of the city, and owned by the South Fork Fishing and Hunting Club, broke its dam and a resulting inundating torrent poured into Johnstown leaving in its pathway death, wreckage, and ruin—property damage amounting to many millions. It was estimated that 2000 persons were victims of this terrible flood. (The writer, who lived within a mile of the lake will never forget that memorable terrifying event.)

The city and community will ever remember and appreciate the generous response of the outside world to aid the stricken. In the basin of what was that lake is now located the deepest soft coal mining shaft in the world.

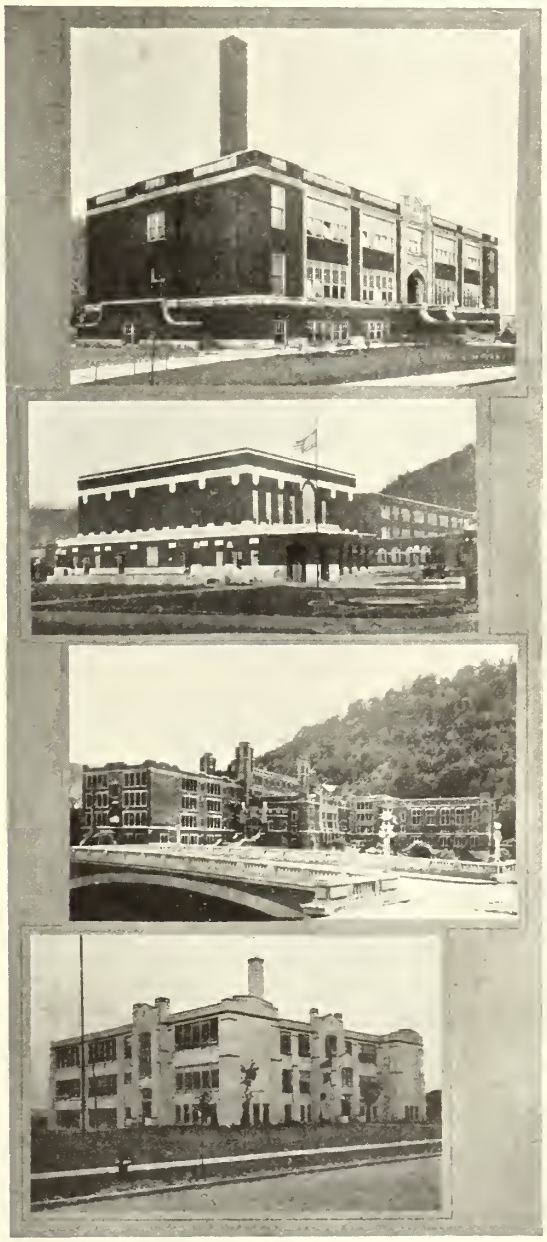
Johnstown Today

Today scarcely a scar of the terrible destruction remains as is evidenced by the following facts which show the growth and progress of Johnstown since this flood. Johnstown was incorporated a third-class city in 1889, with an area of 5.76 square miles; a population of 66,983, proper; metropolitan, 105,134; post office receipts totalling, $317,074.06; one hundred and thirty-five industrial plants; products estimated at $125,000,000; number of persons employed, 20,000; a pay roll of $30,000,000; retail stores, 1000; wholesale stores, 114; banks, 11; branch banks, 3; deposits, $50,000,000; resources, $60,000,000; a bank clearing of approximately $300,000,000; eight parks, a total area of 222 acres; twenty-one supervised playgrounds; a public stadium with a seating capacity of 18,000; two country clubs; five service clubs; two golf courses; one municipal swimming pool; eleven theaters; one senior high school; three junior high schools; thirty grade schools; 14,000 pupils enrolled; fourteen grade parochial schools; one parochial high school; total enrollment, 3500; one business college; one junior college; one public library; two daily newspapers; one hundred and three churches; four steam railways; eight interurban bus lines; two electric lines; four State highway routes; homes, 16,000; hotels, 10; hospitals, 8; and one hundred physicians and as many members of the dental profession.

Johnstown Hospitals

The Conemaugh Valley Memorial Hospital was founded in 1889 with the aid and funds of the flood commission and with addition it served for many years as the only public hospital in the vicinity. During 1920, the Johnstown Hospital was merged with it, and in 1927, a new building costing approximately $750,000 was erected.

It is complete in every respect and has a number of unique features, one of which is the pediatric department. The hospital has a bed ca-



HIGH SCHOOLS OF JOHNSTOWN

pacity of approximately 400 and is equipped with six operating rooms; an up-to-date pathological laboratory, and roentgen ray laboratory with full time operator; has one hundred twenty-five student nurses and full complement of supervisors, and a medical director and directress of

nurses. The hospital also operates a modern dormitory for its nurses as well as a training school for nurses, a day school within the hospital, for orthopedic and long tenure child patients. That the generosity of the outside world was most far-reaching in its effect is evidenced by the extensive service the hospital has rendered to the city and its environs.

The Mercy Hospital, the second largest hospital in the city, was opened to the public in 1911, and has a bed capacity of 125. The hospital is operated under the direction of the Sisters of Mercy, and gives a far-reaching and extensive service, and also maintains a training school for nurses and is on the approved list of the American College of Surgeons.

The Lee Homeopathic Hospital, named in memory of Dr. J. K. Lee, one of Johnstown's pioneer physicians, recently has been rebuilded with all modern facilities found in a smaller hospital. It was opened to the public in 1920.

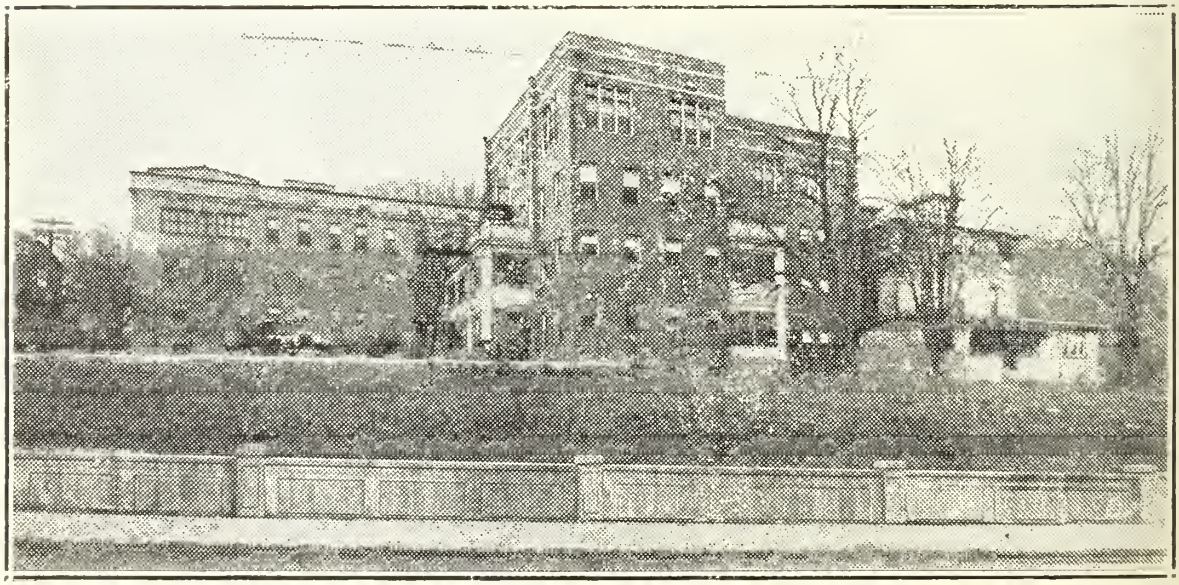
The Cambria Hospital, which is operated by the Bethlehem Steel Corporation, was opened by its predecessor, the Cambria Steel Company, was the first industrial hospital to be opened by any industrial concern in the United States for the exclusive care of employees only and is fully modern in construction and equipment. It began operation in 1887, and has been in active service continuously up to the present, maintaining a full staff of physicians, surgeons, and nurses. Dr. John B. Lowman is, and has been for many years, surgeon-in-chief.

A point of more than passing interest is the Tuberculosis Sanatorium located on the William Penn Highway, two miles east of Cresson, under the control of the Commissioner of Health, Dr. Theodore B. Appel, and supervised by Dr. Thomas H. A. Stites. It was opened in December, 1912, by Dr. Samuel G. Dixon. The sanatorium affords 220 beds for adults with clinically active tuberculosis; and a dormitory with 60 additional beds for nonclinically active patients. A camp department of ten cottages accommodates 80 women, and 15 cottages, 120 men; a juvenile department provides for the care of a total of 240 children, ages ranging from 6 to 16 years; a total of 18,306 patients have been admitted since the institution was opened. The equipment consists of adequate laboratory and roentgen ray facilities with power, heating, water, and disposal systems. The institution operates a poultry farm comprising as many as 7000 hens to supply eggs, while in addition raising 250 swine, provides fresh lard and pork, all of which helps to balance the cost of operation. Thirty-six persons have been trained and given certificates denoting their ability to care for and nurse tuberculous patients.

The Host

Cambria County, and Johnstown, its metropolis, is the home of the Cambria County Medical Society, the host of the Eightieth Annual Session of the Medical Society of the State of Pennsylvania. One hundred and sixty-seven physicians comprise the membership of the society, all of whom are vitally interested in the work of organized medicine. The Society was formed in 1852, reorganized in 1868, again in 1882, and chartered in 1892.

Ample accommodations for all attendants of the Session will be arranged, including housing, catering, entertainment features, parking space



MERCY HOSPITAL

for autos, etc. The business district of Johnstown is compact and all centers of activities are in close proximities to the hotels.

Meeting Places and Headquarters

The various sections will be featured at the following places, easily noted on the accompanying map of the city: Board of Trustees, seventh floor of the Fort Stanwix Hotel; House of Delegates, Ballroom of the Fort Stanwix Hotel; General Meetings, the auditorium of the State Theater and the Ballroom of the Fort Stanwix Hotel; Section on Medicine, Joseph Johns Junior High School; Section on Surgery, Ballroom of the Fort Stanwix Hotel; Section on Eye, Ear, Nose, and Throat Diseases, third floor, Y. M. C. A Building; Section on Pediatrics, American Legion Building; Section on Urology, Y. M. C. A. Building; Section on Dermatology and Syphilology, Y. M. C. A. Building; Public Meeting, Central High School Building; Reception and Ball for the President, Sunnehanna Country Club; general headquarters, scientific exhibit, registration bureau, information bureau, commercial exhibits, basement and mezzanine floors of the State Theater.

Local Committees on Arrangements

The local committees on arrangements have the following chairmen: general chairman, Dr. O. G. A. Barker; finance, Dr. George Hay; hotel, Dr. H. W. Salus; entertainment, Dr. W. O. Lubken; Public Meeting, Dr. L. W. Hornick, scientific exhibit, Dr. Horace B. Anderson; automobile, Dr. Edward Pardoe; golf, Dr. J. P. Replogle; advisory, Dr. W. E. Matthews; intercounty, Dr. O. G. A. Barker; publicity, Dr. J. D. Keiper; hospitality, Dr. W. B. Templin.

THE CONEMAUGH VALLEY MEMORIAL HOSPITAL

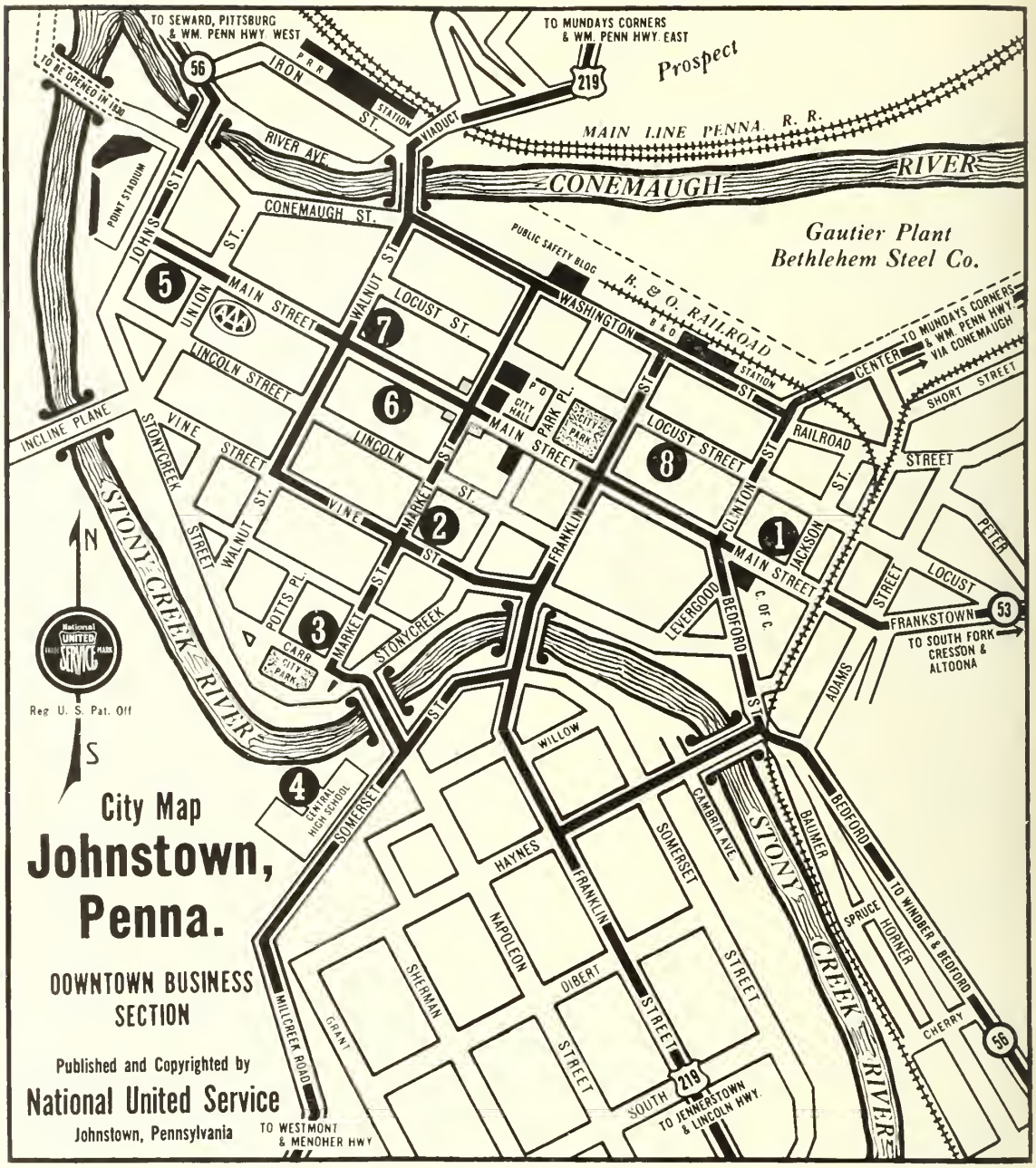
Reunions of Alumni

During the Eightieth Annual Session, Johnstown, October 6 to 9, the alumni of the various medical schools will hold reunions.

An outing for the University of Pennsylvania alumni will be held Wednesday, October 8. Any one intending to attend should obtain his ticket at the time of registration. Automobiles for transportation will be furnished, and will be at the Fort Stanwix Hotel at 5 p. m.

There will be a Jefferson Alumni luncheon, to be held at 1 p. m., Wednesday, October 8, at the Sunnehanna Country Club. Transportation

THE CAMBRIA HOSPITAL



Key to Map of Johnstown

Headquarters. Basement and Mezzanine Floors of the State Theater, immediately adjoining the Fort Stanwix Hotel (No. 6 on map), hotel headquarters.

1.—Auditorium.

2.—Y. M. C. A. Building.

3.—Joseph Johns Junior High School.

4.—Central High School.

5.—American Legion Building.

6.—Fort Stanwix Hotel.

7.—Capital Hotel.

8.—B. P. O. Elks' Home.

to the club will be furnished. Automobiles to be stationed at the Fort Stanwix Hotel.

Alumni dinners to be arranged by the following chairmen of committees: University of Pennsylvania, Dr. Robert C. Davis; Medico-Chirurgical College, Dr. Robert J. Sagerson;

ELKS' HOME
Headquarters for the Woman's Auxiliary

Baltimore Medical College, Dr. W. M. Kuhlman; Temple University, Dr. C. K. Tredennick; Jefferson Medical College, Dr. H. M. Stewart; University of Pittsburgh, Dr. C. H. Schultz; Hahnemann Medical College, Dr. G. F. Wright. Alumni dinners are scheduled for Wednesday evening, October 8, at 6 p. m.

Entertainment

Dr. Joseph P. Replogle, chairman of the Golf Committee, requests that entry reservations for the golf tournament to be played on Monday, October 6, be made at as early date as possible. The links will open on Sunday preceding the tournament. Communication can be made with Dr. Replogle directly. Dinner for the members of the Medical Society who play in this golf tournament will be served at the Sunnehanna Country Club.

The Johnstown-Windber Gun Club will be open on Monday, October 6, at 2 p. m., and a special clay target shoot will be held for those members who care to avail themselves of the opportunity to indulge in that sport. Appropriate prizes will be afforded for the contestants. The chairman of the Publicity Committee will be pleased to receive reservations for this event or answer communications relating thereto. You are requested to bring your favorite trap gun as its transportation requires very little space to carry.

The speaker for the smoker is a character of international renown, while Mr. Charles M. Schwab, who requires no special introduction and whose birthplace and present home is this same Cambria County, will give the address of welcome. Any one missing this event will indeed miss a rare treat.

An information bureau will aid to orientation, arrangements, and registration. All that is required to assure your convention's fullest measure of success obviously is your presence.

J. D. Keiper, M.D.,
Publicity Chairman.

THE SCIENTIFIC PROGRAM

The Scientific Program was published in full in the August number of the Pennsylvania Medical Journal. It contains a diversified group of subjects which will be discussed by members of the society who are well qualified to speak authoritatively. The guest speakers are men of national reputation in their various fields of endeavor.

The general meeting will open as usual with the organizational aspects of the Society, an address by the incoming president, Dr. Ross V. Patterson, and announcements of the various features of the session. The other general sessions will be devoted to scientific discussion of important public health subjects, including diphtheria immunization, the use of x-ray and radium therapy in the treatment of cancer, the

CAPITAL HOTEL

mentally retarded child, puerperal sepsis, undulant fever, therapeutic and surgical innovations.

The Section on Medicine will take up method of diagnosis and management of gastro-intestinal conditions, thyroid disease, cardiovascular disturbances, arthritis, and a discussion of personality make-up in medicine. This Section will join with the Urological Section to discuss the medical and surgical problems of genito-urinary tuberculosis.

The Section on Surgery will have symposia on fractures of the humerus, ovarian cysts, and sympathectomy. Osteomyelitis and empyema will be discussed in conjunction with the Pediatric Section. There will be papers on the vascular system with particular reference to treatment of surgical conditions.

The Urological Section, in addition to its meeting with the Medical Section, includes in the program such interesting topics as the preprostatic patient, obstructions at the vesical neck, carcinoma of the bladder, water metabolism in urology, hematogenous infections of the kidney, renal vascular anomalies, vesiculitis, and prostatitis.

The Section on Eye, Ear, Nose, and Throat Diseases has arranged a program covering cataract extraction, axial myopia, foreign bodies of the eye, foreign protein therapy, a demonstration of cataract cinematography, mastoiditis, eustachian bouginage, peroral endoscopy, neoplasms about the head and neck, treatment of chronic disease of the nasal accessory sinuses, and systemic dissemination of rhinopharyngeal infections. There will, also, be case reports of unusual interest.

The Section on Pediatrics will open with a luncheon clinic at the Memorial Hospital under the direction of Dr. F. W. Mayer, of Johnstown. In addition to the joint meeting with the Surgical Section there will be symposia on diabetes mellitus and nutrition as well as case reports.

The Section on Dermatology will discuss differential diagnosis of such conditions as varicella, variola, varioloid, measles, and scarlet fever. Other papers will include precancerous dermatoses, ringworm fungi, and eruptions of the negro child. There will be a half hour clinic under the direction of Dr. John W. Barr, of Johnstown.

There are numerous case reports covering a variety of conditions which have come under the personal observation of different members of the Society. The guest speakers will bring to the Society results of research and clinical work being carried on in different parts of the country outside of Pennsylvania.

The following biographies give in brief the activities of the outside men, who are to be our guests:

THE GUEST SPEAKERS

General Session

Charles Robert Austrian, an internist of national reputation, will review some of the more recent therapeutic advances in internal medicine. He speaks with authority based upon extensive experience at Johns Hopkins Hospital. Dr. Austrian received his A.B. degree at Johns Hopkins University in 1904 and was graduated in medicine in 1909. He is associate professor of clinical medicine at Johns Hopkins University and physician-in-charge of the Dows Clinic, also physician-in-charge of the Hebrew Hospital. He is a member of various national societies and has contributed a great deal to the literature on medical subjects.

Dr. John Alexander, of Ann Arbor, Michigan, who will speak before the General Session, Thursday, on "The Present Status of Thoracic Surgery," is well known in this country and abroad. He has contributed a great deal to this somewhat new but very important field of surgery. Dr. Alexander received his B.S. degree from the University of Pennsylvania in 1912, his M.A. in 1913, and was graduated from the School of Medicine in 1916. He took postgraduate study in surgery and anatomy in the University of Paris and Lyon in 1919. He was for a while assistant professor of surgery at the University of Pennsylvania and now is associate professor of surgery at the University of Michigan. He has gained an international reputation by his contributions to thoracic surgery and his numerous publications including a textbook, *The Surgery of Pulmonary Tuberculosis,* are well known.

Section on Medicine

Dr. Emanuel Libman, who is to be one of the guest speakers of the Section on Medicine, was born in 1872. He graduated from Columbia University College of Physicians and Surgeons in 1894. Dr. Libman is professor of clinical medicine at the College of Physicians and Surgeons in New York. He is a member of the Association of American Physicians, American College of Physicians, American Association of Pathologists and Bacteriologists, and Society of American Bacteriologists. Dr. Libman is one of the outstanding internists in this country and has made notable contributions both to pathology and to clinical medicine, his chief interest being devoted to cardiovascular disease.

Dr. Loring T. Swaim is one of the outstanding men of the country doing work in arthritis. Much of his work has been at the Massachusetts General Hospital and at the Peter Brent Brigham Hospital. He was born in 1882 and was graduated from Harvard University School of Medicine in 1909. He is a member of the leading orthopedic societies of the country.

Section on Surgery

Dr. Hubert A. Royster, A.B., M.D., F.A.C.S., of Raleigh, N. C., surgeon to the Rex Hospital of Raleigh, N. C.; surgeon-in-chief St. Agnes Hospital; clinical instructor in surgery at the Duke University; surgeon to Southern Railway; consulting surgeon Seaboard Air Line, and Norfolk Southern Railroad; consulting surgeon of the State Hospital of Raleigh; former dean of the University of North Carolina Medical Department; former president of the Tri-State Medical Association, and the Medical Society of the State of North Carolina;

author of a splendid book, *Appendicitis,* the subject on which the speaker is to lecture.

The other guest speaker is our good and well-known friend, *Dr. Joseph Colt Bloodgood,* of Baltimore, Md., B.S., M.D., F.A.C.S., associate in surgery at Johns Hopkins Hospital, 1897 to 1914; assistant instructor and associate in surgery, 1895 to 1903; associate professor on clinical surgery, 1895 to 1927; clinical professor of surgery, 1927 to date; chief surgeon at St. Agnes Hospital; member of American Surgeon Association, society of Clinical Surgery, American Society for Control of Cancer, American Radiological Society.

Dr. Bloodgood began his surgical career at the University of Pennsylvania, then at the Children's Hospital in Philadelphia. He then went to Johns Hopkins Hospital and was associated with Dr. Halstead. It was here he became particularly interested in the pathologic material removed at operations. This stimulated his activity in the field of cancer, and resulted in the establishment of the Surgical Pathological Laboratory of the Johns Hopkins Medical School.

Dr. Bloodgood is now director at the Garvin Research Laboratory. He has always been interested in the education of the public to the danger of delay in dealing with cancer.

Section on Eye, Ear, Nose, and Throat Diseases

Dr. Arnold Knapp, of New York City, will speak on "Some Points in Connection with Cataract Extraction." Dr. Knapp, after graduating from Harvard University, received his medical degree from Columbia University, College of Physicians and Surgeons, in 1892. Following his internship at the Roosevelt Hospital, he devoted two years to postgraduate study in Berlin, Leipsic, Heidelberg, Vienna, and Paris. He held the chair of ophthalmology at the College of Physicians and Surgeons from 1903 to 1928, and has been executive surgeon of the Herman Knapp Memorial Eye Hospital since 1908. He is author of a book, *Medical Ophthalmology,* as well as numerous monographs in ophthalmic literature, and still continues as editor of the *Archives of Ophthalmology.*

Dr. Joseph C. Beck, of Chicago, graduated from the University of Illinois College of Medicine in 1895, and became associate professor of otology, rhinology, and laryngology at his alma mater a short time later. He is a member of the American Academy of Ophthalmology and Otolaryngology, American Otological Society, and numerous other organizations. He is also a member of the American College of Surgeons and the American Bronchoscopic Society. He has contributed largely to the literature of our profession and ranks high in its archives. His subject, "Personal and Practical Experiences with Neoplasms about the Head and Neck, with Special Reference to the Ear, Nose and Throat," should prove a very interesting and valuable contribution.

Section on Pediatrics

Clifford G. Grulee, M.D., of Chicago, a pediatrician of high rank and national fame, is one of the honored guests of the Section. Dr. Grulee is an investigator and writer of prominence in matters pediatric and his book, *Infant Feeding,* has been widely read. Much of his research work has appeared in the medical and pediatric journals of this country and abroad.

At the present time, Dr. Grulee is clinical professor and head of the department of pediatrics at the Rush Medical College, University of Chicago, the position he has held for some time. He is also the attending pediatrician and chief of the pediatric staff at the Presbyterian Hospital, Chicago. It is evident that Dr. Grulee is in contact with a large and varied pediatric practice.

His writing of articles treating of the diseases of infants and children, summing up his special investigations and research in pediatric problems, has resulted in his being made editor-in-chief of the *American Journal of Diseases of Children.* This journal is the recognized pediatric authority in this country. Dr Grulee holds a prominent niche in the pediatric hall of fame and all should hear him.

Dr. William E. Ladd, of Boston, an eminent child surgeon, is the other honored guest of the Section and he will have a double audience for his presentation, that of the Surgical and Pediatric Sections, which will hold a joint meeting on this day in Johnstown. Dr. Ladd has devoted much time to the study of surgical diseases in children, particularly, the acute surgical abdomen in children, upon which he is to speak. There is no one so well qualified to present this subject for he has written extensively on this special phase of surgery. It should appeal to surgeon as well as pediatrist.

Dr. Ladd is a graduate of Harvard and the Harvard Medical School and has been connected with the Children's Hospital, of Boston, for more than 20 years during which time he has amassed a wealth of experience in child surgery. For the past 5 years, Dr. Ladd has been chief surgeon at the Boston Children's Hospital, also, assistant professor in surgery at the Harvard Medical School.

From the length of experience and interesting connections it is self-evident that Dr. Ladd has been fortunate and should have a very enlightening address to make on the acute surgical abdomen in children. Do not miss it.

Section on Dermatology

Dr. George Miller MacKee, of New York City, is one of the best known dermatologists in the world. He was actively associated with the late Dr. John A. Fordyce for more than 22 years, first at the Bellevue Medical College and later at the College of Physicians and Surgeons of Columbia University. Their work resulted in the building up of a teaching clinic of wide renown. Dr. MacKee is, at present, professor and director of the department of dermatology and syphilology of the New York Postgraduate Medical School and Hospital. Most of his associates in former institutions are still with him and the clinic is well equipped to carry out all phases of pedagogy and research. He is also consultant at St. Vincent's Hospital and Sea View Hospital and is a lecturer at the Trudeau School of Tuberculosis.

Early in his career, Dr. MacKee became interested in the use of x-rays both as a diagnostic procedure and as a therapeutic modality. His enthusiasm for x-rays and radium has always been tempered with a conservatism which has markedly influenced medical thought. Endowed with boundless energy, Dr. MacKee has spent a large part of his spare time in research. Part of this work finally culminated in his authoritative book, *X-Rays and Radium in the Treatment of Skin Diseases.* This volume was thoroughly revised in 1927 in a second edition. In addition to this, he has contributed to date, more than 150 articles to medical publications.

Dr. MacKee has always been actively interested in editorial work. He edited and added an appendix to Fournier's *Syphilis* in 1908. From 1909 to 1920 he was editor of the *Journal of Cutaneous Diseases* (now the *Archives of Dermatology and Syphilology)* and has been a member of the editorial board of the *Archives*

of Dermatology and Syphilology from 1920 to the present time.

Dr. MacKee's forceful and kindly personality contributes to his success in teaching, which is of wide reputation. Many of his former pupils are now prominent specialists. Dr. MacKee not only stimulates his associates by precept to do original research work but also takes an interest in their personal welfare. Photography is one of his chief hobbies and his collection of pictures of dermatologic diseases is one of the most complete and beautiful in existence.

Dr. MacKee has practiced in New York City for 30 years. He is a Fellow of the New York Academy of Medicine and an active member in the New York County and State Societies, the American Medical Association, the American Dermatological Association, the Congress of Physicians and Surgeons, the American Roentgen Ray Society, the American Radiological Society, the American College of Roentgenologists, the New York Dermatological Society, the Manhattan Dermatological Society, the Brooklyn Dermatological Society, the Harvey Medical Society, and is Honorary Member of several foreign dermatologic societies.

Section on Urology

Dr. William F. Braasch, director of the urologic section of the Mayo Clinic, will take a prominent part in the symposium upon genito-urinary tuberculosis.

Dr. Braasch occupies a prominent position in American urology and has been a pioneer in the field of modern methods of diagnosis. It is needless to say that his experience as a diagnostician and interpreter of urologic symptomatology has placed him in the forefront in this specialty. His work and publications upon pyelography alone have added much to our knowledge of the subject of renal disease to say nothing of the other problems he has presented.

Prof. Braasch was born in Lyons, Iowa, July 6, 1878. He was graduated from the collegiate department of the University of Minnesota as a Bachelor of Science, in 1900; later in 1903 receiving the M.D. degree from the same institution. He, at present, is professor of urology, Mayo Foundation, University of Minnesota.

He is a member of the A. M. A., Minnesota State Society American Urological Association, and many other medical and scientific societies both at home and abroad.

As an author and original thinker he occupies a very enviable position both in America and Europe. We know that his presence at the meeting will add greatly to the interest of those who attend. Dr. Braasch has always a keen message to deliver and we are certain that this section is to be congratulated upon his acceptance to be present and take part in its program.

THE SCIENTIFIC EXHIBIT

The scientific exhibit of the Medical Society of the State of Pennsylvania embraces a large, varied field, and will, as ever, be of much interest and importance. Since science is defined as "knowledge obtained and verified by accurate tests and observations," one may be sure that these exhibits will be an important and definite revelation of the continuous progress made by the medical profession.

The scientific exhibit will be located on the basement and mezzanine floors of the State Theater, adjoining the Fort Stanwix Hotel, the hotel headquarters. Through the careful supervision of Dr. Horace B. Anderson, chairman, his local committee, and the enthusiastic coöperation of the officers of the various sections, the scientific exhibit promises to be practical, instructive, and attractively interesting. Each section is sponsoring an exhibit illustrative of its particular interest.

A series of motion pictures will be presented in the motion picture theater located on the basement floor. Among the films will be one, "Technic and Physical Factors in the X-ray Treatment of Deep-seated Cancer," by Dr. B. P. Widmann, of the Philadelphia General Hospital. The first films that have been the result of the combination of the American College of Surgeons and the Eastman Teaching Films, Inc., will be shown through the courtesy of the Eastman Teaching Films, Inc. Members of the American College of Surgeons have supervised the preparation of these scenarios and the editing of the films with a view to securing the most accurate scientific material as picture content. The ingenious and difficult animations which add so much to the graphic nature and the general effectiveness of the films, and the photography of each film, have been produced under the direction of a leading physician or surgeon. In addition each scenario and each film have been examined and approved by the American College of Surgeons. Some of these films are: "Acute Appendicitis," produced under the direction of Dr. Edward Martin, of Philadelphia; "The Treatment of a Normal Breech Presentation," produced under the direct supervision of Dr. Joseph B. DeLee, of Northwestern University Medical School; "The Development of the Fertilized Rabbit's Ovum," photographed by Dr. Warren H. Lewis, of the Carnegie Institute of Embryology, Baltimore; others are, "The Technic of Blood Transfusion," "Prostatic Hypertrophy," "Indirect Inguinal Hernia," and "The Ectopic Heart." To show the influence of drugs on the gastro-intestinal system, the Petrolagar Laboratories will present some scientific films that have been prepared under the supervision of physicians.

The Section on Medicine is sponsoring the Cardiovascular Exhibit, given under the direction of the Pennsylvania Heart Association, with the Philadelphia Heart Association, the Heart Committee of the Allegheny County Medical Society, and the Robinette Foundation contributing. This exhibit consists of colored photographs of the different cardiac lesions, and also roentgenograms of the coronary circulation, both normal and abnormal; mortality statistics in Pennsylvania by counties and population, also mortality

statistics for the last quarter of a century; an exhibit of the coronary circulation which is being prepared by Dr. Bellet, of the Philadelphia General Hospital. They will, also, show electrocardiographs, both normal and abnormal, and will have a portable galvanometer for taking tracings of physicians and their families. In their booth will be installed a projector showing a continuous motion picture of the circulation of the blood through the heart. Dr. Alexander Margolies and Dr. Charles C. Wolferth will make an exhibit of heart sound tracings to illustrate the murmurs of mitral stenosis, aortic regurgitation, reduplication of the first and second sounds, the early diastolic snap of mitral stenosis, gallop rhythm and the third heart sound.

Associated with the exhibit of this Section is that of Dr. Richard A. Kern and Dr. Harry Paul Schenck, who will present an exhibit on allergy consisting of mounted specimens of plants, indigenous to northeastern United States, which cause hay fever.

Under the auspices of the Section on Surgery, Dr. Temple Fay and Dr. Eugene P. Pendergrass will present an exhibit on encephalography, and show aërograms of the brain and cord, and roentgenograms of sinus pathology to reveal the relationship between this condition and bronchial asthma.

The exhibit under the auspices of the Section on Eye, Ear, Nose, and Throat Diseases will be in charge of Maj. George R. Callender, curator of the Army Medical Museum, Washington, D. C. This exhibit was prepared especially for the meeting of the American Academy of Ophthalmology and Otolaryngology which will be held in Chicago, later in October. The exhibit consists of photographs and photomicrographs of ocular pathologies, the various tumors predominating. These will be properly mounted and illuminated.

Under the auspices of the Section on Pediatrics, Dr. William Jackson Merrill will show the importance of treatment in early childhood and infancy for pronated flatfoot and clubfoot. He will give a demonstration of manipulation, massage, and mechanical means for correction.

The Section on Dermatology will hold a clinic under the direction of Dr. J. W. Barr, of Johnstown.

The Section on Urology will sponsor an exhibit directed by Dr. Joseph C. Birdsall and Dr. Francis G. Harrison, of Philadelphia. This exhibit will consist of a demonstration of carcinoma of the gall bladder and prostate with aërocystograms to illustrate.

Under the direction of Dr. Henry F. Hunt, the George F. Geisinger Memorial Hospital, Danville, will exhibit brief history abstracts, photographs of patients, gross specimens, and photomicrographs of various thyroid conditions.

Dr. B. P. Widmann, chief radiologist, and J. Weatherwax, physicist, of the radiological department of the Philadelphia General Hospital, will demonstrate appliances, models, etc., applicable for various anatomical lesions and for different types of roentgen ray and radium treatments. They will describe and illustrate exact technics, doses, etc., used in the successful treatments of various types of lesions. In their booth will be installed a motion picture projector to present pictures showing a detailed account of giving high voltage and roentgen ray treatment with special reference to systems of charting and some recording particularly applicable to the systematic application of roentgen ray therapy in large hospitals as well as smaller institutions.

The exhibit of the State Department of Health will be devoted to a photographic study of the Crippled Children's Hospital at Elizabethtown. In addition there will be a series of professional pictures which will show in detail, and by contrast, the orthopedic work which is being carried on at this institution. Physicians are invited to obtain stenographic service at this booth, and to make this their headquarters.

The exhibit of the Pennsylvania Tuberculosis Society will include a number of posters, small quantities of authoritative literature used in the educational activities of tuberculosis organizations in Pennsylvania and other states, and photographs showing tuberculosis in children. In addition to the exhibit already outlined, the Pennsylvania Tuberculosis Society will demonstrate the intracutaneous tuberculin test.

Dr. Jacob H. Vastine and Dr. George E. Pfahler will demonstrate the newer technic in the treatment of cancer of the mouth by means of the gamma rays from radium. They will exhibit colored photographs with charts and diagrams of the apparatus and equipment necessary for radium treatment.

Dr. Wilmer Krusen, president of the Philadelphia College of Pharmacy and Science, will demonstrate living microscopic animals highly magnified, showing cell functions and organic processes similar to man. He will also show plant cells carrying on their functions in comparison to those of the lower animals. A compilation of charts will show the medicinal uses of the different preparations and drugs of the present U. S. Pharmacopœia. Some of the newer apparatus, useful in medicinal and pharmaceutical work, which this college is now using, will be demonstrated, such as ultraviolet light, ampoule-filling machine, and the photo-electric counting apparatus.

THE TECHNICAL EXHIBIT

On the basement and mezzanine floors of the State Theater, associated with the scientific exhibit, is located the technical exhibit. This exhibit is heartily commended to all the profession, their guests, and the members of the Woman's Auxiliary.

The apparatus, supplies, and products that will be on display represent initially the skilled work of ingenious designers, inventors, chemists, and physicists. It is gratifying to know that many of the articles that will be exhibited are direct products of the thoughts and endeavors of members of the medical profession.

A study of the various exhibits displayed will certainly impart new ideas, and it is hoped that each person attending the convention will include in his daily schedule a certain period of time for the careful inspection that insures definite and accurate comprehension and progressive interest. An apt comparison, recently made by a prominent physician is, "A leisurely visit through the technical exhibits is very much like a postgraduate course."

Also this leisurely visit will certainly be found a pleasure because of the attractiveness of the exhibits and the kind and courteous attendants who will be present to answer any questions concerning the particular exhibit.

The technical exhibit of the Medical Society of the State of Pennsylvania conforms with the Technical Exposition of the American Medical Association in that only ethical and Council approved articles are exhibited.

Companies and institutions that will appear among the technical exhibitors are as follows:

Atomizers

The DeVilbiss Company, Toledo, O.

Chemical, Biological, and Pharmaceutical

The Columbus Pharmacal Co., Columbus, O.
Corega Chemical Co., Cleveland, O.
Davies, Rose & Co., Ltd., Boston, Mass.
The Gilliland Laboratories, Inc., Marietta, Pa.
The Maltbie Chemical Co., Newark, N. J.
Merck & Company, Rahway, N. J.
Mutual Pharmacal Co., Syracuse, N. Y.
The National Drug Co., Philadelphia, Pa.
Petrolagar Laboratories, Inc., Chicago, Ill.
William H. Rorer, Inc., Philadelphia, Pa.
G. D. Searle & Company, Chicago, Ill.
E. R. Squibb & Sons, New York, N. Y.
Tailby-Nason Co., Cambridge, Mass.
The Zemmer Company, Pittsburgh, Pa.
Lee-Strauss Company, Inc., Johnstown, Pa.

Electrical Apparatus

General Electric X-Ray Corp., Chicago, Ill.
The Kelley-Koett Mfg. Co., Inc., Covington, Ky.
McIntosh Electrical Corp., Chicago, Ill.
Pennsylvania Electric Co., Johnstown, Pa.

Electro-Diagnostic Instruments

Cameron's Surgical Specialty Co., Chicago, Ill.

Foods

Harold H. Clapp, Inc., Rochester, N. Y.
Gerber Products Division, Fremont Canning Co., Fremont, Mich.
Mead Johnson & Co., Evansville, Ill.
Horlick's Malted Milk Corp., Evansville, Ind.
Johnstown Sanitary Dairy Co., Johnstown, Pa.
Laboratory Products Co., Cleveland, O.
Mellin's Food Co., Boston, Mass.
Merrell-Soule Co., Syracuse, N. Y.
Moores & Ross Dietetic Laboratories, Inc., Columbus, Ohio.

Insurance

Medical Protective Co., Chicago, Ill.
United States Fidelity & Guaranty Co., Philadelphia, Pa.

Medical Books

D. Appleton & Co., New York, N. Y.
P. Blakiston's Son & Co., Philadelphia, Pa.
C. V. Mosby Company, St. Louis, Mo.
W. B. Saunders Co., Philadelphia, Pa.

Mineral Water

Kalak Water Co. of New York, Inc., New York, N. Y.

Miscellaneous

W. E. Johnson Candy Co., Johnstown, Pa.
T. E. Malbranc, Johnstown, Pa.

Pharmacists

McKennan Drug Co., Pittsburgh, Pa.
Valley Drug Company, Johnstown, Pa.

Physicians' and Hospital Equipment

A. S. Aloe Company, St. Louis, Mo.
Feick Brothers Co., Pittsburgh, Pa.
Holland-Rantos Co., New York, N. Y.
Johnstown Office Supply Co., Johnstown, Pa.
Johnstown Physicians Supply Co., Johnstown, Pa.
E. B. Meyrowitz Surgical Instruments Co., Inc., New York, N. Y.
National Surgical Co., Philadelphia, Pa.
Sharp & Smith, Chicago, Ill.

Prescription Opticians

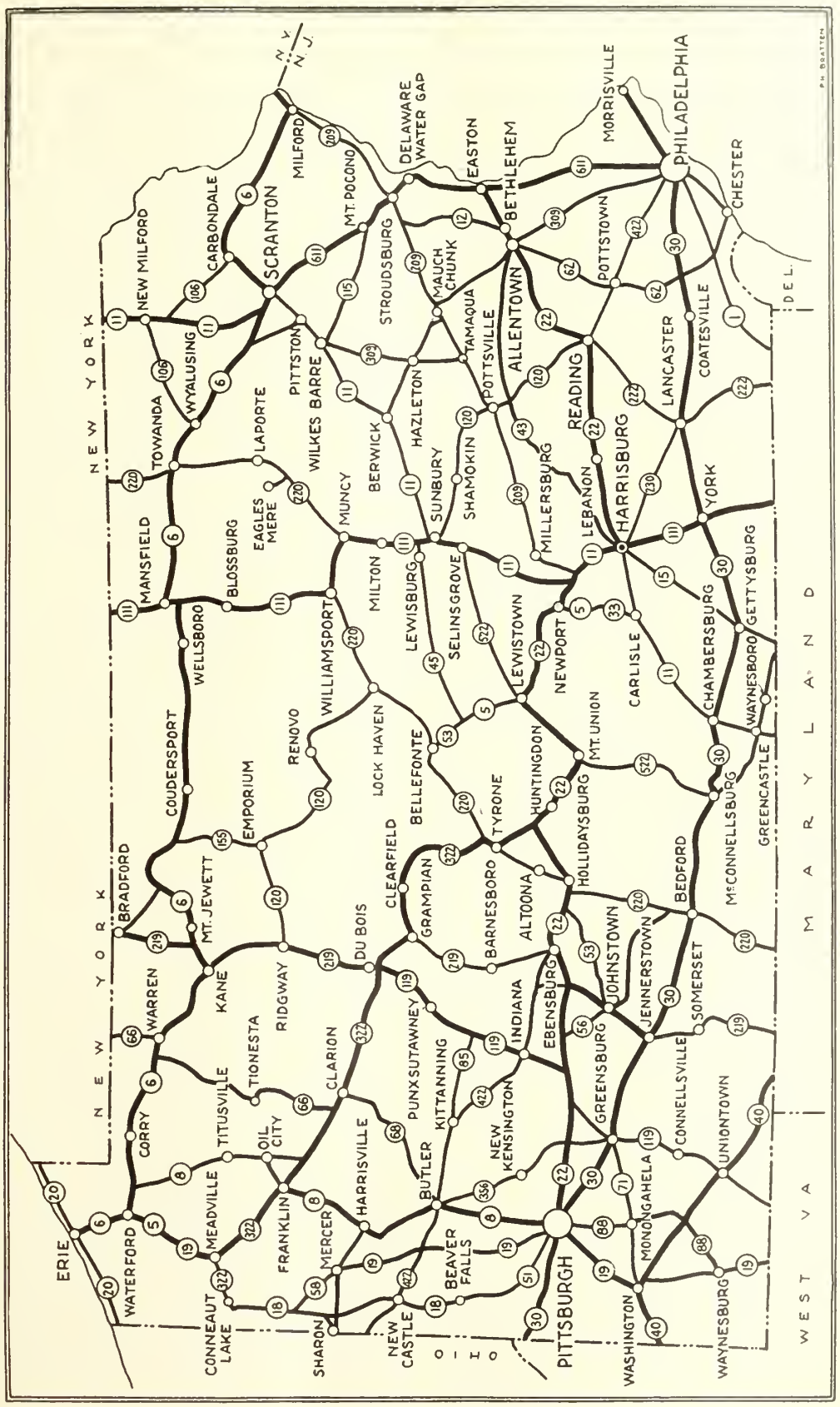
American Optical Company, New York, N. Y.
McIntire, Magee & Brown Co., Philadelphia, Pa.
Street, Linder & Propert, Philadelphia, Pa.
White Haines Optical Co., Columbus, O.

KEY TO ROAD MAP OF PENNSYLVANIA

See page 817 for Map

This road map is intended as a key to the principal thoroughfares of Pennsylvania. The numbers of the highways, indicated on the map will be found on metal markers along the highways. Of the most important trans-State highways, are the following:

Route No. 30—The Lincoln Highway.
Route No. 11-611—Lackawanna Trail.
Route No. 22—William Penn Highway.


N E W Y O R K
N. Y. / N. J.
ERIE
WATERFORD
CORRY
MEADVILLE
TITUSVILLE
OIL CITY
FRANKLIN
MERCER
SHARON
CONNEAUT LAKE
WARREN
KANE
TIONESTA
RIDGWAY
CLARION
HARRISVILLE
BUTLER
BEAVER FALLS
NEW CASTLE
O-I-O
PUNXSUTAWNEY
KITTANNING
NEW KENSINGTON
INDIANA
EBENSBURG
GREENSBURG
PITTSBURGH
WASHINGTON
WAYNESBURG
MONONGAHELA
CONNELLSVILLE
UNIONTOWN
SOMERSET
JOHNSTOWN
JENNERSTOWN
BEDFORD
McCONNELLSBURG
GREENCASTLE
BRADFORD
MT. JEWETT
EMPORIUM
DU BOIS
CLEARFIELD
GRAMPIAN
BARNESBORO
ALTOONA
TYRONE
BELLEFONTE
HUNTINGDON
HOLLIDAYSBURG
MT. UNION
CARLISLE
CHAMBERSBURG
WAYNESBORO
GETTYSBURG
COUDERSPORT
WELLSBORO
RENOVO
LOCK HAVEN
WILLIAMSPORT
LEWISBURG
SELINSGROVE
LEWISTOWN
NEWPORT
MANSFIELD
BLOSSBURG
EAGLES MERE
MILTON
MUNCY
SUNBURY
SHAMOKIN
MILLERSBURG
LEBANON
HARRISBURG
YORK
TOWANDA
LAPORTE
WILKES BARRE
BERWICK
HAZLETON
POTTSVILLE
READING
LANCASTER
COATESVILLE
CHESTER
WYALUSING
PITTSTON
STROUDSBURG
TAMAQUA
ALLENTOWN
POTTSTOWN
PHILADELPHIA
MORRISVILLE
NEW MILFORD
CARBONDALE
SCRANTON
MILFORD
MT. POCONO
MAUCH CHUNK
BETHLEHEM
EASTON
DELAWARE WATER GAP
DEL.
WEST VA
MARYLAND

Route No. 111-11-111—Susquehanna Trail.
Route No. 6-5-19-322-22—Lakes-to-Sea Highway.
Route No. 219—From the Maryland line, south of Meyersdale, to the New York line, north of Bradford.
Route No. 6—Roosevelt Highway.
Route No. 20—The Yellowstone Trail.
Route No. 40—National Pike.
Route No. 1—Baltimore Pike.
Route No. 422-22-11—Philadelphia to Chambersburg, via Reading and Harrisburg.
Route No. 522-11—Lewistown to Narrowsburg, N. Y., via Wilkes-Barre and Scranton.

A new macadam road, from Bedford to Johnstown, was opened only a short time ago. This road is for those who come west on the Lincoln Highway, and saves about 15 miles of the distance. To take it, the motorist should turn to the right in Bedford on route 220, and then turn to the left at Cessna on route 56, to Johnstown. This road will be well marked in Bedford and in Cessna.

The Woman's Auxiliary to the Medical Society of the State of Pennsylvania

MRS. WILDER J. WALKER, *Editor*
546 South Street, Greensburg, Pa.

THE SIXTH ANNUAL MEETING

The sixth annual meeting of the Woman's Auxiliary to the Medical Society of the State of Pennsylvania to be held in Johnstown, October 6 to 9, 1930, will have the second floor of the Elks' Home for registration headquarters; and the Fort Stanwix Hotel, for hotel headquarters.

Members are requested to register at registration headquarters immediately upon their arrival. Here they may obtain all information about meetings and entertainments. Cards of invitation to all social affairs should be procured in advance at Table No. 5, Registration Headquarters, which is open daily from 8.45 a. m. to 11.45 a. m. and from 2.00 to 4.00 p. m. Tickets for the Executive Board Dinner and Auxiliary Luncheon should be purchased in advance at Table No. 6, Registration Headquarters.

Auxiliary meetings and social events are open to all visiting women, whether members of an Auxiliary or not. Every woman is cordially invited, and asked to register.

The program for this sixth meeting appears in full in the August JOURNAL.

THE MONTHLY MESSAGE OF THE PRESIDENT

DEAR AUXILIARY MEMBERS:

This month I introduce to you a pair of Cinderellas, who have been fitted with their glass slippers and are doing their pretty song and dance in the medical ballet. The younger sat in her ashes for so short a time, and was so quickly and so satisfactorily fitted, that most of us know her only in her gauze and spangles, though her name is a terrifying reminder of her dark past—Signorina Endocrinology. Fate dealt so quickly and so kindly with her. Today I allow her merely to make her little curtsy and a graceful exit, perhaps to be recalled later for a *pas seul,* while we watch with a critical eye her less fortunate—I was going to say "elder sister," but this poor thing sat so long in her cinders that she was universally believed to be a toothless hag, her very existence a disgrace to the family.

The twentieth century is an age of marvels, and one of its most brilliant innovations is the medical beauty parlor. A new medical broom one day attacked the proverbial closet with such vigor that our poor old skeleton was swept out, hurled across the dump heap, and landed on the threshold of the beauty parlor, where a kind-hearted attendant took her in and the search for the glass slipper was begun.

That was 20 years ago, and I defy any one to recognize poor old "Crazy Jane" in the smart, modishly dressed Mlle. Psychiatry of today, the last word in the Medical Fashion Show.

"What's in a name?" A revolutionary change in the attitude of the public, both lay and medical, is profoundly affecting the mind of the public not only in its approach to the problem of those suffering from mental disease, but almost more markedly in the treatment. No longer are these unfortunates feared and hated, subjected to cruel indignities, scorn and derision, and made the sport of the mob. An "asylum" well justified its name as a refuge from such outrages, though the custom of chaining up the inmates without occupation often resulted in hopeless insanity.

Today "asylums" have become "hospitals" or "sanatoriums," in which everything possible is done to discover and remove the cause of mental disease, and by sympathetic and intelligent treatment to restore the patient to normal health.

The need for such hospitals is evident when one reads the startling news that in Pennsylvania today *as many hospital patients are victims of mental disease as of all other diseases put together.* We hear much of the ravages of cancer, of heart and kidney disease, which so frequently end in the grave that no one can fail to note their prevalence. Mental illness is less shocking in its fatalities, but its character is so distressing that hope for its cure must rejoice every heart, and possibility of its *prevention* seem a veritable oasis in a weary land.

Prevention—that is my joyous message today. Perhaps you who read these lines may know as little as I did only last week of the wonderful opportunities right at our door in Pennsylvania to help the mentally ill to a happy solution of their difficulties. The secret lies in *prompt action.* In mental disease, no less than in cancer, are early diagnosis and prompt treatment essential to recovery. Far from being the prerogative of the rich, this boon is available to all. The Bureau of Mental Health of the State Welfare Department has established 65 mental hygiene clinics, where Tommy's tantrums and Susy's sulks, so foreign to the accustomed nursery routine, may be carefully studied. One may almost venture the assertion that *any* abnormality in the behavior usual to a particular family, especially in the children, will bear investigation. If the cause can be removed, the individual will at least be a more agreeable traveling companion on the voyage of life, and even incurable conditions may be much ameliorated by systematic, sympathetic, scientific treatment. In no field of medicine is there more need for special, highly trained experts, both physicians and nurses or attendants. Hospitals everywhere are devoting much attention to the subject.

Even 65 clinics may not reach all suffering from mental disease, in which case a letter to Dr. William C. Sandy, Welfare Department, Harrisburg, will bring a prompt reply, with advice as to the proper steps to secure the necessary examination, after which a variety of procedure is offered.

For those needing care in institutions there is *no waiting list* for mental hospitals. There is a waiting list, however, to institutions for mental defectives, i. e., Polk, Laurelton, and Pennhurst.

One group, perhaps, needs only readjustment of their daily routine, in which case suitable advice is given in the clinics, and is followed by any required supervision.

For educable mental defectives, classes are formed with surprising results, many of these patients becoming self-supporting members of the community.

I cannot go into all the ramifications of mental hygiene, for the reason that I know nothing whatever about the subject, but the news that mental illness is *preventable,* and that mental clinics are scattered *thick as huckleberries* all over the State, is too good to keep. So in spite of my having only last week been introduced to Mlle. Psychiatry, and on the chance that there are others sunk in ignorance as benighted as mine, I have ventured to invite you all to watch her graceful pirouettes, with confidence that her beauty and charm will prove no less captivating to you than to me.

One wonders who next will be brought from the ashes to wear the dainty slipper and delight our eyes with her pretty ways.

Faithfully yours,

CORINNE KEEN FREEMAN, *President.*

COUNTY AUXILIARY REPORTS

Lackawanna.—The auxiliary had a very delightful luncheon at Overbrook-on-the-Trail on July 17. Various flowers were used on the individual tables. Mrs. L. M. Elsinger, the hostess, was in charge. Mrs. U. P. Horger, the president, gave an interesting talk. Bridge followed the luncheon. About forty members were present.

The doctors on the staff of the State Hospital and their wives and families had an outing at Irem Temple, Dallas, in July. Golf, swimming, and bridge were enjoyed during the afternoon and dinner was served at 6.30 p. m.

Lehigh.—The June meeting of the auxiliary was held at the home of the president, Mrs. Charles R. Fox, Northampton. Following the regular business meeting, Mrs. Fox entertained at cards. A luncheon followed. Two new members were received.

The July meeting was in the form of an outing held at the Lehigh Country Club. A luncheon was enjoyed followed by cards. The auxiliary is planning to have a family outing in August.

Somerset.—On Tuesday evening, May 27, the Medical Society and the auxiliary enjoyed a banquet at the Ferner Hotel in Somerset. After the banquet, the regular order of business was conducted with the president in the chair.

It was voted that the fifty dollars, the proceeds of the card party held on April 29, be sent to the Medical Benevolence Fund. At the close of the meeting the auxiliary was invited to join the Medical Society in their program of the evening.

The annual outing of the Medical Society and the auxiliary was held July 15 at the Somerset Country Club. The dentists of the county and their wives were invited to meet with the Medical Society and the auxiliary. The afternoon was spent playing cards, golf, and tennis. Dinner was served at 6.30 p. m.

After the dinner, Dr. C. T. Saylor, president of the County Society, introduced the speaker of the evening, Dr. James R. Cameron of Philadelphia, who spoke on "Diseases of the Mouth," which he illustrated with lantern slides.

Dr. and Mrs. Joseph J. Meyer, of Johnstown, were guests.

WOMAN'S AUXILIARY

to the

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA

OFFICERS

PRESIDENT: Mrs. Walter Jackson Freeman, 1507 Spruce St., Philadelphia.

PRESIDENT-ELECT: Mrs. John F. McCullough, Box 49, R. D. 2, Sharpsburg, Pittsburgh.

VICE-PRESIDENTS: *First*—Mrs. T. Kenneth Wood, Muncy; *second*—Mrs. Theodore B. Appel, 305 N.

Duke St., Lancaster; *third*—Mrs. Clarence R. Phillips, 924 N. 3d St., Harrisburg.

RECORDING SECRETARY: Mrs. Joseph A. Stackhouse, 156 W. 8th Street, Erie.

CORRESPONDING SECRETARY: Mrs. George Gorgas Ross, 1530 Locust St., Philadelphia.

TREASURER: Mrs. Howard C. Frontz, Huntingdon.

PARLIAMENTARIAN: Mrs. Augustus S. Kech, 210 Logan Ave., Altoona.

DIRECTORS: *3 years*—Mrs. Charles B. Forcey, 105 Beaver St., Sewickley; Mrs. Charles G. Strickland, 236 W. 6th St., Erie. *2 years*—Mrs. William J. Hertz, 125 N. 8th St., Allentown; Mrs. Charles H. Smith, 93 Morgantown St., Uniontown. *1 year*—Mrs. W. Wayne Babcock, 1720 Spruce St., Philadelphia; Mrs. J. Newton Hunsberger, 514 W. Main St., Norristown.

COMMITTEE CHAIRMEN

ARCHIVES: Mrs. David B. Ludwig, 6231 Wellesley Ave., Pittsburgh.

BUDGET: Mrs. W. Wayne Babcock, 1720 Spruce St., Philadelphia.

BY-LAWS: Mrs. Herman B. Allyn, 419 S. 45th St., Philadelphia.

DISTRICT COUNCILORS Mrs. Theodore B. Appel, 305 N. Duke St., Lancaster.

HYGEIA: Mrs. Edward Pardoe, South Fork.

LEGISLATIVE: Mrs. E. Kirby Lawson, 2533 Walnut St., Harrisburg.

NOMINATING: Mrs. William E. Parke, 1534 N. 15th St., Philadelphia.

PERIODIC HEALTH EXAMINATION: Mrs. John H. Page, Austin.

PROGRAM: Mrs. Joseph J. Meyer, 319 Palliser St., Johnstown.

PUBLIC HEALTH EDUCATION: Mrs. Wilmer Krusen, 17 Bailey Road, Lansdowne.

PUBLIC RELATIONS: Mrs. Edward Lyon, 900 High St., Williamsport.

PUBLICITY: Mrs. Wilder J. Walker, 546 South St., Greensburg.

CAMBRIA COUNTY AUXILIARY OFFICERS

PRESIDENT: Mrs. Calvin C. Rush.

VICE-PRESIDENTS: *First*—Mrs. W. Brian Templin; *second*—Mrs. John W. Barr.

SECRETARY: Mrs. Clarence M. Harris.

TREASURER: Mrs. Arthur Miltenberger.

CAMBRIA COUNTY AUXILIARY CONVENTION COMMITTEES

General: Mrs. Joseph J. Meyer, chairman; Mrs. Clarence B. Millhoff, financial chairman.

Credentials and Registration: Mrs. Clarence M. Harris, chairman; Mrs. Edwin T. Ealy, vice chairman; Mrs. Homer C. Blough, Mrs. Stanley A. E. Brallier, Mrs. Harry J. Cartin, Mrs. F. Orville George, Mrs. Charles E. Hannan, Mrs. Katherine Kress, Mrs. Jacob D. Keiper, Mrs. A. W. Leech, Mrs. B. Elkins Longwell, Mrs. Louis H. Mayer, Sr., Mrs. Clarence B. Millhoff, Mrs. Harry G. Nickel, Mrs. Robert M. Palmer, Mrs. Darwin T. Powelson, Mrs. Lynn L. Porch, Mrs. John L. Sagerson, Mrs. Olive Schill, Mrs. David W. Truscott.

Auxiliary Luncheon and Executive Board Dinner: Mrs. Edward Pardoe, chairman; Mrs. Phillip R. Cleaver, vice chairman; Mrs. David S. Bantley, Mrs. Edwin C. Boyer, Mrs. William A. Prideaux.

Hospitality: Mrs. Daniel P. Ray, chairman; Mrs. Frank G. Scharmann, vice chairman; Mrs. Olin G. A. Barker, Mrs. Arthur Benshoff, Mrs. Robert C. Davis, Miss Eva Griffith, Mrs. Nellie Griffith, Mrs. Emlyn Jones, Mrs. Leighton W. Jones, Mrs. John P. Lowman, Mrs. William Edgar Matthews, Mrs. Robert M. Palmer, Mrs. Ray Parker, Mrs. Paul W. Riddles, Mrs. Webster Saylor, Mrs. Merritt B. Schultz, Mrs. George Wagoner, Mrs. Charles White.

Pages: Mrs. Laird R. Altemus, chairman; Mrs. Seward R. Davison, vice chairman; Mrs. Francis T. Carney, Mrs. Thomas J. Cush, Mrs. Fred Martz, Mrs. William J. Murray, Mrs. G. Irving Naylor, Mrs. W. Brian Templin, Mrs. Charles K. Tredennick.

Teas: Mrs. Lycurgus M. Gurley, chairman; Mrs. Olin G. A. Barker, vice chairman; Mrs. Harry F. Gockley, Mrs. B. Elkins Longwell, Mrs. Daniel S. Rice.

Printing and Badges: Mrs. John W. Barr, chairman; Miss Jessie Tomb, vice chairman; Mrs. Mosheim W. Kuhlman, Mrs. Sylvester S. Kring, Mrs. Milton U. McIntyre, Mrs. Clarence C. Spicher.

Convention Hall: Mrs. Charles H. Schultz, chairman; Mrs. Arthur Miltenberger, vice chairman; Mrs. Chalmers Craig, Mrs. Edward C. Dankmeyer, Mrs. Homer L. Hill, Mrs. Merritt B. Schultz.

Flowers: Mrs. Calvin C. Rush, chairman; Mrs. William O. Lubken, vice chairman; Mrs. Katherine Kress, Mrs. Henry Pohl, Mrs. Walter C. Raymond, Mrs. I. E. Sloan.

Inter-County: Mrs. Augustus S. Kech, chairman, Blair County; Mrs. Charles I. Shaffer, vice chairman, Somerset County; Mrs. Howard Buterbaugh, Indiana County; Mrs. Walter Enfield, Bedford County.

President's Reception and Ball: Mrs. Robert J. Sagerson, chairman; Mrs. Harry M. Stewart, vice chairman; Mrs. Horace B. Anderson, Mrs. Elsworth F. Arble, Mrs. H. G. Diffenderfer, Mrs. Charles E. Hannan, Mrs. John B. Lowman, Mrs. Thomas E. Mendenhall, Mrs. Louis H. Mayer, Sr., Mrs. Harry H. Penrod, Mrs. Harry T. Prideaux.

Luncheon and Bridge: Mrs. William J. Reddy, chairman; Mrs. B. A. Braude, vice chairman; Mrs. George C. Berkheimer, Mrs. Samuel D. Boucher, Mrs. Samuel P. Boyer, Mrs. Kent A. Bowman, Mrs. Robert C. Davis, Mrs. William S. Dougherty, Mrs. Lycurgus M. Gurley, Mrs. B. Elkins Longwell, Mrs. Louis H. Mayer, Jr., Mrs. Joseph P. Replogle, Mrs. Frank G. Scharmann, Mrs. George F. Wheeling.

Transportation: Mrs. William F. Mayer, chairman; Mrs. Charles E. Hays, vice chairman; Mrs. Horace B. Anderson; Mrs. Milton C. Dunnick; Miss Elmira Martin; Mrs. Harry W. Salus; Mrs. George F. Wright.

Theater Party: Mrs. Charles K. Tredennick, chairman; Mrs. William E. Grove, vice chairman; Mrs. Harry F. Gockley, Mrs. Winter O. Keffer, Mrs. Joseph P. Replogle, Mrs. Annie Statler.

A sentiment is a good thing to start some good idea a-going, but it takes hard coöperative effort on the part of many interested persons to produce practical results. Avail yourself of the opportunity to produce practical results by attending the Annual Session.

ROSS VERNET PATTERSON, M.D.

Ross Vernet Patterson, President-Elect

Ross Vernet Patterson was born in New Orleans, Louisiana, October 5, 1877.

Dr. Patterson, whose ability and integrity have placed him in the foremost rank of the leading physicians of Pennsylvania, traces his descent from Benjamin Harrison, signer of the Declaration of Independence. His father was John Harrison Patterson, of Colorado Springs, Colorado, whose lineage, followed back along the diverging lines of direct descent, leads into the Colonial Period of American history. His mother was Marguerite Jeanne Vernet, a descendent of the Vernet family noted in France for painters and soldiers.

Dr. Patterson's childhood and early life were spent in the South and West. Early in life he had decided to study medicine. A great-grandfather had practiced the healing art in New York City.

His preliminary education was obtained in various schools. After common school courses finished in Colorado Springs, college preparatory work was begun in Central College, Missouri, and completed in Chenet's Institute, New Orleans, Louisiana. He then entered Washington University in St. Louis, Missouri, and completed two years, after which he matriculated in the Jefferson Medical College, and was graduated from this institution in 1904.

The two years following graduation were spent in residence at the Philadelphia General Hospital, in which he served as intern, assistant physician to the Department for the Insane, and assistant chief resident physician.

In the autumn of 1906, Dr. Patterson was appointed the executive officer of the Jefferson Medical College, with the title of sub-dean. In 1916, the trustees of the college appointed him dean, which position he still holds. It may be said, without fear of contradiction, that during his incumbency, the institution has prospered as never before in her history, and the popularity and rank which she maintains among the foremost medical schools of this country are due, in part, to his untiring efforts in her behalf, and his practical business methods in the management of her affairs.

During 1906, Dr. Patterson was appointed to a teaching position in the department of medicine of the college. Successive promotions brought him to the appointment of professor of medicine, which position he resigned in 1927. In his teaching his thought was always directed toward perfection, and his efforts were continuously put forth in the line of improvement, with the result that he gave to his students in the Jefferson Medical College a forceful, comprehensive and clear-cut outline of the subjects included in the course of study which he taught—diseases of the heart and the circulatory system, lungs, and kidneys.

He has made a number of contributions to medical literature bearing chiefly upon cardiac and renal derangements.

His specialty is internal medicine, paying especial attention to cardiovascular diseases. In 1908, he established in the Jefferson Hospital, Philadelphia, a Heart Station, for the special study of cardiac diseases.

Dr. Patterson is a member of various county, state, and national medical societies. He is visiting physician to the Philadelphia General Hospital; a fellow of the College of Physicians of Philadelphia, and a member of a number of clubs and other social organizations. He is a republican, and a member of the Union League of Philadelphia. He is a mason, and a member of the Phi Alpha Sigma medical fraternity, which he served as grand president in 1907.

Dr. Patterson is a lieutenant-colonel, Medical Reserve Corps, U. S. A. Throughout the period of the World War, he was a member of the Philadelphia Auxiliary and the Pennsylvania State Committee of the Council on National Defense, also vice-chairman of the Jefferson Advisory Board. He was directly responsible in securing the funds to establish the Jefferson Base Hospital Number 38, and for its acceptance by the War Department.

In 1928, the Governor of Pennsylvania appointed him a member of the Freeman Commission to study the laws relating to the healing art.

His charming personality, and warm-hearted interest in the affairs of others have made, during his years in Philadelphia, a steadily increasing number of worth-while friends. Among his associates, colleagues, and the students of the Jefferson Medical College, his talents and personal merits have always been accorded enthusiastic recognition and sincere appreciation.

Doctor Patterson is unmarried.

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*Symposium on Certain Aspects of Nephritis**

THE CHEMISTRY OF NEPHRITIS

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The chemical aspects of nephritis might theoretically, for purposes of discussion at least, be treated under two main headings, namely, the primary chemical and physicochemical changes that occur in the kidney itself, and the secondary effects on the rest of the body. Practically, the present state of knowledge limits the discussion to the latter, and, therefore, our remarks concern the secondary chemical changes that take place in nephritis which are due to the impairment in the normal function of the kidneys.

In the course of the chemical changes that take place in the body, various substances are produced as waste products. In the oxidation of the simpler types of fats and carbohydrates, carbon dioxid and water are produced. The metabolism of protein yields in addition to carbon dioxid and water a number of organic compounds containing nitrogen, as ammonia, urea, creatin and creatinin as well as phosphoric and sulphuric acids. From nucleoprotein in man, uric acid is produced. These waste products are more or less toxic and, therefore, must be eliminated from the body. Those that are volatile, as carbon dioxid, are eliminated through the lungs. The nonvolatile waste products, as the urea, phosphoric acid, sulphuric acid, uric acid, etc., can be eliminated only by the kidneys.

In addition to the elimination of various nonvolatile waste products produced in the body metabolism, the kidneys play a very important rôle in maintaining the water and mineral balance of the body tissues and fluids. Furthermore, toxic substances ingested or produced in the intestinal tract and absorbed are eliminated by the kidneys.

It is frequently stated that the function of the kidneys is to eliminate waste products from the body. Such a statement does not, however, do them justice. The ability of the kidney to prevent the elimination of useful substances, as glucose, serum, proteins, etc., and to excrete chlorids and water in large amounts when present in excess, but to markedly decrease their elimination when the body lacks them, is not recognized in such a definition. The function of the kidneys can probably be better stated to be to keep the blood plasma more or less constant in composition. The elimination of waste products, such as urea, naturally is included in such a definition for since they are continually being produced in the body, they must be eliminated to prevent their concentration in the blood rising above normal. Changes in the composition of the plasma are reflected in the urine. If there is an excess of sodium chlorid or urea, an increased rate of elimination of these bodies results; if there is a deficiency of chlorid in the plasma, a decrease or cessation in the elimination of this substance occurs. When the hydrogen ion concentration of the blood rises above normal, a more acid urine is excreted; if it falls below normal, a more alkaline urine is eliminated. On the other hand, if the composition of the plasma cannot be kept normal as regards all of its constituents, there is an effort on the part of the organism to maintain a constant osmotic pressure rather than a constant concentration of any one constituent.

The composition of the blood is dependent upon the functional state of activity of the organs of absorption and elimination and of the various tissues of the body. For this reason we will consider the changes that occur in the composition of the blood for they reveal the nature of the chemical changes that occur in nephritis. These changes are more marked if kidney function is seriously impaired, as in certain cases of acute nephritis and the advanced stage of chronic disease.

Nonprotein Nitrogen of the Blood.—The nonprotein nitrogen comprises all the organic compounds containing nitrogen exclusive of the blood proteins. The nitrogenous waste products, as urea, creatinin, uric acid, etc., comprise the bulk. The amount of nonprotein nitrogen in the blood is influenced to some extent by the amount of protein ingested.

* Read before the Section on Medicine of the Medical Society of the State of Pennsylvania, Erie Session, October 3, 1929.

The average normal is between 25 and 35 mg. in 100 c.c. of blood. It is frequently stated that the values found in hospital patients with apparently normal kidneys cover a wider range, from 25 to 45 mg. If the diet, however, does not exceed 100 grams of protein, the nonprotein nitrogen in normal individuals ranges between 25 to 35 mg., certainly values above 40 mg. should be further investigated. In the presence of urinary evidence of kidney disease, i. e., slight increase in amount of albumin and casts, on a protein intake not exceeding the amount indicated above a nonprotein nitrogen between 35 and 40 mg. per 100 c.c. is significant.

Urea Nitrogen.—Quantitatively, urea is the most important end product of nitrogenous metabolism. About 50 per cent of the total nonprotein nitrogen is due to urea normally, and, therefore, the urea content of the blood is commonly used as an index of the amount of nitrogen waste in the blood. In nephritis the nonprotein nitrogen and urea have practically the same significance. The urea values may be expressed in terms of the number of mg. of urea per 100 c.c. of blood or as mg. of urea nitrogen. The nitrogen comprises 46 per cent of the total weight of urea, and, therefore, the urea nitrogen values are about one-half those for urea.

As in the case of the nonprotein nitrogen it is difficult to draw a sharp line of demarcation between normal and pathologic values. For practical purposes, however, from 10 to 20 mg. of urea nitrogen per 100 c.c. of blood may be considered the normal range. Expressed as mg. of urea the corresponding amounts would be 20 to 40 mg. The interpretations placed upon nonprotein nitrogen values hovering around the upper limit of the normal range apply also to urea values falling within the upper limit of normal for blood urea. The determination of the nitrogenous waste products in the blood is a direct and reliable test of renal function as regards the capacity of the kidneys to carry out one of their important functions, namely, the elimination of the nitrogenous waste from the body. The reserve capacity and adaptability of the kidneys, however, is so great that the nonprotein and urea nitrogen of the blood remain within the normal range until serious impairment in function occurs. The evidence bearing on this point indicates that no demonstrable retention of nitrogen may occur until this function of the kidney is reduced to about 50 per cent of the normal. For practical purposes, therefore, when an increase in the nonprotein and urea nitrogen of the blood occurs, it indicates serious bilateral diffuse kidney injury, which signifies serious loss of flexibility and reserve capacity. The amount of increase in the nonprotein and urea nitrogen in general parallels the loss of function so that very high values may be found in the terminal stages of nephritis. As a test of renal function in the incipient stage of nephritis the determination of the waste nitrogen in the blood alone is of little value. Finally, it should be remembered that strictly speaking the concentration of the nitrogenous waste products in the blood can be interpreted only in relation to that function of the kidney which concerns the elimination of this group of substances and may not necessarily indicate impairment in elimination of other substances, such as water, inorganic salts, etc., as it is well known that retention of nitrogen may not occur in certain types of nephritis.

Creatinin.—For normal individuals the creatinin of blood varies between 1 and 2 mg. per 100 c.c. It is frequently stated that creatinin is eliminated more readily than the other nitrogenous waste products and, therefore, is the last to increase in the blood. In any event, the creatinin, like the urea, does not increase in the blood until kidney function is badly impaired. In chronic nephritis if the creatinin rises to 4 or 5 mg. per 100 c.c. of blood, improvement rarely occurs and death follows within a comparatively short time.

Uric Acid.—The normal amount of uric acid in the blood is 2 to 3 mg. per 100 c.c. of blood. Uric acid is thought to be eliminated with greater difficulty than the urea and creatinin and, therefore, is the first to increase in the blood, and so is a more delicate index of renal function. This may be true. To a certain extent butyric acid, like the other nitrogen waste products, does not increase in the blood in nephritis until the reserve functional capacity has been seriously curtailed.

Phosphate.—Phosphorus exists in different forms in the blood but we will mention only the inorganic phosphate. Normally the blood serum contains from 2.5 to 5.5 mg. of inorganic phosphate expressed as P per 100 c.c. of blood. In nephritis the inorganic phosphate may be greatly increased due to retention of phosphoric acid.

Sulphate.—The normal sulphate figures for plasma are in the neighborhood of 0.5 to 0.9 mg. of sulphur per 100 c.c. of blood. In nephritis, figures as high as 16 mg. have been observed.

The retention of phosphoric and sulphuric acid emphasizes the important part that the kidneys play in maintaining the normal approximate neutrality of the body. In the normal metabolism of protein these strong nonvolatile acids are produced and it is due in part to the ability of the kidney to eliminate them that the

normal balance between acid and base is maintained. When the ability to excrete them is impaired they tend to accumulate in the body with resulting acidosis. The effect of this is more serious than the retention of the known nitrogenous waste products for the acidosis that develops is far-reaching in its harmful effects on all of the organs and tissues of the body. By utilizing the information now available as regards the various factors concerned in maintaining the normal approximate neutrality of the body, and the chemical composition of foods, with special reference to the quality and quantity of protein and ash content, much can be done to relieve this situation. Certainly the same amount of attention that has been given to the protein content of the diet in relation to retention of nitrogen, if directed along the above lines, would be more helpful.

Carbon Dioxid Capacity of the Blood.—Normally 100 c.c. of blood contains 55 to 65 c.c. of carbon dioxid per 100 c.c. held in combination with base as bicarbonate. In general the extent of the decrease in the carbon dioxid capacity in nephritis is a measure of the failure of the kidneys to function as an important link in the mechanism discussed in relation to retention of phosphate and sulphate, which maintains the normal acid base balance of the body.

Chlorid.—The distribution of chlorid between corpuscles and plasma is not equal. Expressed as sodium chlorid the normal concentration of chlorid in the plasma is 570 to 620 mg.; for whole blood about 450 to 500 mg. per 100 c.c. In certain nephritics an increase in the concentration of chlorid occurs. This is commonly observed in those who show other evidences of failure on the part of the kidney to carry out its function of maintaining the normal osmotic relations within the body as edema, decrease in plasma protein, retention of acid, and change in concentration of other electrolytes in the blood. The increase in the chlorid content of the blood may be due in part to the lowered ability to excrete salt, or to a compensatory attempt to maintain the normal osmotic condition of the blood in the face of faulty water elimination and loss of plasma protein. The retention of chlorid may not be associated with retention of urea and the other nitrogenous waste products on the one hand and on the other those nephritics showing retention of urea may not show retention of chlorid.

Blood Serum Proteins.—The average normal values are about 5.6 grams of albumin and 1.9 grams of globulin per 100 c.c. of blood, with a total of 7.5 grams per 100 c.c. A decrease in the amount of protein in the serum is most commonly found in those nephritics excreting large amounts of protein in the urine. The albumin content of the serum is usually decreased more than the globulin with the result that the globulin makes up a larger percentage of the total than normally. The decrease in the protein content of the blood is due in part to the failure of the kidney to withhold it as normally.

This decrease in blood serum proteins tends to disturb the normal osmotic relations of the blood and so has an unfavorable influence on the activity of the tissue of the body as a whole. Great decrease in blood proteins is usually associated with the loss of considerable amounts of protein in the urine. This has an important bearing on the protein content of the diet necessary to maintain the individual in nitrogen equilibrium. It is impossible for even a normal individual to excrete nitrogen in excess of that ingested over a long period of time and remain in good health. If a nephritic is to survive for a prolonged period the protein ingested should be sufficient to meet the usual body requirement and offset the tissue protein lost in the urine as well. The type of nephritic that eliminates in the urine very large amounts of albumin, and has a marked reduction in the protein content of the blood, with retention of water and salt, does not usually have retention of nitrogen waste products, or at least to a marked degree. Low protein diets in this type may be contraindicated. One might go on indefinitely enumerating other changes in the composition of the blood that may occur in nephritis as the high cholesterol values found in certain degenerative types, the marked fall in calcium that sometimes occurs, etc. The examples given are sufficient to indicate the nature of some of the important changes that occur and their far-reaching effect on the metabolism of the body as a whole.

Renal Function Tests.—Much of the work on nephritis, of a chemical nature, has centered around the development of functional tests to determine the extent of renal damage. Chemical analysis of the blood alone yields valuable information but as previously stated no demonstrable change in the composition of the blood may occur until the functional reserve of the kidney is seriously impaired. This speaks well for the great capacity of the kidney to carry on under handicaps but renders chemical analysis of the blood alone of little value as a test of renal function in the early or incipient stages of nephritis. This has led to the development of numerous tests based upon the determination of the concentration of certain constituents in the blood and the amount of the substance excreted in the urine. The elimination of urea has

been most extensively used as an index of renal function. Müller, McIntosh, and van Slyke have recently reviewed the various urea excretion tests of renal function and have proposed a modification which incorporates the influence of urine volume on rate of urea excretion. They have applied the terms maximum blood urea clearance and standard blood urea clearance to their test.

The maximum blood urea clearance represents the volume of blood which one minute's excretion suffices to clear of urea when the urine volume is large enough, 2 c.c. per minute or over, to permit a maximum urea output. This blood volume averages in normal men about 75 c.c. per minute. When the volume of urine falls below 2 c.c. per minute, the volume of blood, the urea content of which is excreted per minute, is not constant but varies in proportion to the square root of the urine volume. For purposes of comparison a standard urine volume of 1 c.c. per minute has been adopted. By means of a formula the urea excretion actually measured with urine volumes under 2 c.c. per minute can be expressed in terms of the standard of 1 c.c. adopted. The standard blood urea clearance indicates the efficiency with which the kidneys excrete urea when the urine volume is at the average normal level of 1 c.c. per minute. The maximum blood urea clearance indicates the maximum efficiency of urea excretion with high urine volumes. The average normal value for the maximum urea clearance is 75 c.c. of blood cleared of urea per minute. The average normal for the standard blood urea clearance is 54 c.c. of blood cleared of urea per minute.

Technic for Determining the Blood Urea Clearance as a Measure of Renal Efficiency.—The necessary data are the concentration of urea in blood and urine, and the volume of urine excreted in a measured time. The manner in which these three values are secured may be varied to suit conditions.

The individual is not subjected to any previous routine, except that vigorous exercise is avoided and the previous meal should be a moderate one, preferably without coffee. The most desirable time of day, when excretion is least liable to fluctuations, is in the hours between breakfast and luncheon. The patient remains quiet while the urine is collected during two succeeding periods of one hour each. A few minutes before the end of the first hour a blood sample is drawn.

The urea in the blood is determined by chemical analysis and the blood urea clearance calculated employing a formula. The blood urea clearance test is probably the most reliable test of renal function available at the present time.

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DIAGNOSIS OF UREMIA

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In the course of and especially toward the end of cases of nephritis—acute or chronic—as well as in other conditions (such as cystic kidneys, obstruction of the ureters, and the like) which cause interference with renal function, certain symptoms arise which are traditionally attributed to failure of excretion by the kidneys of substances which, when retained in excess in the blood, are supposed to be capable of producing toxic symptoms.

Among the clinical manifestations referred to, the following may be mentioned as frequent and conspicuous: Increasing weakness and mental, as well as physical, incapacity, depression, somnolence, and finally, in extreme cases, stupor and coma; dimness of vision and other ocular symptoms; loss of appetite, digestive disorders, nausea and vomiting, and intestinal troubles including flatulence and sometimes diarrhea; headache, neuralgia, restlessness; dyspnea and other respiratory disturbances; dryness and itching of the skin and various eruptions; finally aphasia or paralysis and localized or general epileptiform convulsions.

As these symptoms occur when there is manifest kidney disease and when the functional efficiency of the kidney is more or less definitely impaired, it was a reasonable conclusion that the conditions named are due to failure of the kidney to excrete substances produced by katabolism and toxic if retained in excess.

All the symptoms named have, therefore, come to be regarded as due to such retention of substances ordinarily efficiently excreted by the kidney and, as urea stands at the head of renal excretion, the term uremia has been applied to the whole list. Such terms, therefore, as uremic vomiting, uremic diarrhea, uremic dyspnea or asthma, uremic headaches, uremic amaurosis or blindness, and uremic convulsions, coma, etc., are commonly employed.

Gradually, however, as knowledge regarding the physiology of renal function and the chemical aspects of renal disease have become clearer and the differentiation of forms of renal disease has been more certainly established, it has become evident that many of the clinical occurrences in nephritic patients, heretofore regarded as uremic, in the sense of conditions due to retention of excretory substances, are in no sense due to such a cause.

The diagnosis of uremia, in cases of quite manifest nephritis, therefore, involves the recognition of the symptoms which are really or probably due to retention, and the ability to distinguish these from other symptoms, arising

from quite different causes, though their association with renal disease would, at first, suggest that they are of uremic origin. It is, of course, essential in the consideration of the whole subject to observe that our scheme of classification of kidney disease is defective in so far as we ordinarily center our attention on the kidney, which is, of course, conspicuously the seat of organic change. As a matter of fact, with few exceptions, when we speak of kidney disease, a large, if not major, part of the pathology concerns the entire vascular system, or the general metabolism, and the kidney is but a part and not, perhaps, the essential part of the whole disease. One may easily overemphasize the general systemic conditions accompanying renal disease as perhaps to an extent has been done in the preceding statement, but the validity of the statement lies in the fact that, from the time of Bright up to quite recent years, too much emphasis has been placed upon the renal pathology and too little, through lack of knowledge, on the general conditions antecedent to or associated with the kidney disease.

Within recent years methods of chemical study of the blood and of renal excretion have enabled us to follow with some degree of accuracy the functional activity of the kidneys and we have learned what in the way of retention of excretory products the blood might show under varying circumstances in connection with clinical cases of renal disease. These studies have done much toward a better understanding of various symtoms in kidney disease, especially dropsy or edema and uremia, so-called.

It has become evident that, so far as retention of urea and other nonprotein forms of nitrogen are concerned, and so far as these may be assumed to be indices of retention generally (perhaps including substances at present unrecognized), certain of the symptoms heretofore designated as uremia may be properly so considered, while others should be put aside as due to other causes. Moreover, these same studies of chemical conditions indicate that the symptoms of toxic retention have a certain manner of development, differing from the mode of onset of the symptoms not probably uremic in character.

To combine both of these propositions with specification of the symptoms probably toxic (uremic) in causation, the following may be stated as more or less established. True uremia is slow in onset, gradually increasing until its more pronounced manifestations appear; its symptoms include gradual weakening, incapacity, hebetude, somnolence, restlessness, headaches, and other similar nervous symptoms, early ocular disturbances, gastro-intestinal disorders, and finally stupor or coma, preceding death. All of these symptoms and their final full development are preceded by gradually augmented retention of nitrogenous substances in the blood. As a rule uremic symptoms do not occur until the nonprotein nitrogen reaches very high figures. If urea nitrogen is taken as an index, 100 mg. may be taken as the figure above which uremia is likely to appear. Differences, of course, occur in individuals, some being more susceptible than others; but when suggestive symptoms occur in nephritic cases and the nitrogen figures are low, it should be remembered that all the terminal symptoms of nephritis are not necessarily uremic.

In the study of renal cases, sudden onsets of severe symptoms such as convulsions or coma are sometimes found to be unaccompanied by notable changes in the blood chemistry; and in some of the forms of chronic hypertensive vascular disease with minimal evidences of renal disease, severe convulsions, paralyses, and coma occur and disappear with unexpected promptness without any evidences of nitrogenous retention whatever. It is clear that cases of this kind are not at all "uremic" in the ordinary acceptance of the term, and for some years attention has been called to the fact that such symptoms are common in arteriosclerotics and hypertensive cases without renal disease, but more recently it has become evident that similar symptoms in quite definite renal disease are nonrenal in the sense of being due to causes other than insufficient renal excretion and consequent blood retention of excrementitious substances. Thus the convulsive phenomena of severe acute renal disease, so readily interpreted as uremic, have become in modern analysis quite probably not uremic at all.

Recent authors, generally following the teaching of Volhard, classify uremia under these headings: (1) True uremia; (2) convulsive uremia; and (3) pseudo-uremia.

The first of these represents the gradually developed, manifestly toxic, phenomena described before and whether due to retention of urea itself or to other substances, is apparently due to some form of toxic retention. The evidence in favor of special uremia-producing substances described by different observers is rather dubious.

So-called convulsive uremia, whether it occurs in acute or chronic kidney disease, is generally not uremia at all. In acute cases it is probable that the same vascular (capillary) disease that occurs in the kidney also occurs throughout the body and in the brain, and is the occasion of cerebral edema, the cause of the

convulsive symptoms. In chronic cases the cerebral phenomena are doubtless due to disturbed cerebral circulation (spasm of arteries) whether with or without renal disease. Volhard regards arterial spasm as the cause of the cerebral symptoms in acute as well as chronic cases, but recent studies rather support the view given.

Pseudo-uremia is a term employed to designate various symptoms more or less like those of true uremia, but produced by other causes than toxic retention. It is quite certain that such symptoms may be due to circulatory derangements more chronic or slowly developed than those which occasion the acute explosions (convulsions) referred to above.

It is very desirable, if present views are correct, that nomenclatures of this kind should be abandoned and more significant terms should be used.

For many years in connection with acute or chronic nephritis, we have spoken of uremic convulsions and our efforts have been directed toward elimination of toxic retentions; but if so-called uremic convulsions are due to cerebral edema caused by acute capillary disease or arterial spasm in chronic cases, a quite different form of treatment will be requisite.

Improvement in the situation may be brought about by a better nomenclature. It is manifestly disturbing if such names as *acute convulsive uremia* and *pseudo-uremia* are used. As an improvement, and to prevent misconceptions, I would propose that the term "renal eclampsia" be used for convulsive disorders associated with nephritis, acute or chronic; and the term "vasculo-renal syndrome" be used for nonuremic manifestations of other sorts in renal disease.

Thus far the discussion has been confined to the matter of diagnosis of uremia in patients in whom a manifest disease of the kidneys was in evidence. The problem of the clinician is much more complicated when the patients brought to his attention have had severe symptoms such as stupor, coma, or convulsions, which have been the occasion of the first clinical contact, and in whom the discovery of albumin and casts may raise the question of uremia.

It should be remembered in cases of this sort that the mere discovery of albumin and casts and even of the presence of a moderate amount of nitrogen retention does not certainly indicate a renal cause of the cerebral symptoms. Still more important is it that with a little albumin and a few casts in the urine, it should not be immediately concluded that the pronounced symptoms are uremic.

The diagnosis of true uremia then depends upon the undoubted presence of nitrogenous retention in the blood and that in cases of symptoms no matter how violent, unaccompanied by such retention, some other mechanism of causation should be considered. At present most of these nonretention manifestations of nephritics may be attributed to some form of disturbance of the cerebral circulation.

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THE TREATMENT OF KIDNEY DISEASE

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The presentation of this subject will be limited to a discussion of the following topics: (a) Measures to be applied in the hope of preventing nephritis or of avoiding reinfection of an already damaged kidney; (b) removal of edema; (c) relief of circulatory failure; and (d) the administration of dextrose.

(a) Measures to Be Applied in the Hope of Preventing Nephritis or of Avoiding Reinfection of an Already Damaged Kidney

As prophylactic measures, tonsillectomy, sinus drainage, and the clearing up of other areas of focal infection have been recommended. Such procedures are of definite value and should be generally employed.

The demonstration of the presence of acute glomerular nephritis carries with it a mandate for a careful search for and removal of all areas of focal infection. Operative procedures in this type of nephritis may result in recurrences, but by choosing a favorable time for operation, danger is minimized. Such operations should not be performed until the nephritis has passed into a subacute or latent stage.

Removal of focal infection is also indicated in nephrosis and chronic nephritis, but only if the patient is or can be made a favorable operative risk. These patients are victims of a general disease; their resistance is often low; and the removal of infective areas may not improve kidney function. I can recall minor operations which have been followed by recurrence of acute nephritis, or even by general blood-stream infection. I have on my conscience wholesale tooth extractions which not only did not result in demonstrable improvement, but also added misery to persons in whom existence had been almost intolerable before. In recent years, the technic of preoperative preparation has been greatly improved. For this improvement, the profession is largely indebted to the coördinated

efforts of localized surgical, medical, and laboratory groups. The scope of the investigation should be widened. Organization and effort to be conducted along lines somewhat similar to those governing the activities of the American Heart Association would probably result in an advance comparable to that recently attained in regard to knowledge of diseases of the heart.

(b) Removal of Edema

As to the underlying factors which may be responsible for the warehousing of body fluid, our knowledge is incomplete. In nephrosis and in some types of nephritis, the presence of edema may constitute a serious menace to the patient. The presence of edema may thus become an important indication for treatment. Attempts at removal may be successful, unfruitful, or may result in actual harm.

Administration of the low salt diet will often result in rapid disappearance of edema. In other cases, diuresis may begin only after the diet has been persisted in over a period of several weeks. Favorable results are to be expected if blood chlorids are high, but are not limited to cases of this kind. The diet may fail to produce the desired result. It is prescribed alone or in conjunction with other methods of treatment. As reduction of sodium chlorid intake is not harmful, the method should be tried before resorting to more dangerous procedures.

The administration of a high protein diet has recently become an accepted form of treatment in nephrosis. The daily protein intake may be increased to 100, or even to 250, grams, with the result that extensive diuresis frequently occurs. It has been suggested that this diuresis is induced by the large amount of urea which the diet liberates. The high protein diet also tends to replace depleted stores of protein, thereby improving the patient's nutrition and his ability to combat infection.

The treatment is palliative, since favorable alteration in damaged kidney structure is not effected.

Contra-indications to this diet are believed to be the demonstration of high blood nitrogen, of a high phthalein threshold, and probably also of marked arterial hypertension.

The diet may be prescribed in conjunction with the application of other measures, such as reduction of salt and fluid intake. It is often given over a long period of time, and may result in benefit extending over a period of several years.

Diuretics.—We may accept the statement of Frothingham that, in the light of our present ignorance, it is best to withhold diuretics in the treatment of patients with acute nephritis, while in chronic nephritis the value of diuretics is undetermined. Clendening[1] believes that diuretics are like prosperous friends in that they are of least value when most needed. "In health, diuretics will always cause an increased flow of urine: in disease of the tubular epithelium or glomeruli of the kidney or in suppression of urine, they practically do not act at all."

I share the pessimism of the latter writer in regard to the use of xanthin derivatives (caffein, theobromin, theophyllin, and theocin) and of such alkalies as are commonly prescribed. I am somewhat more optimistic as to the value of such acid-forming salts as calcium chlorid and ammonium chlorid, and this because I have seen marked diuresis and consequent reduction of ascites follow administration of the latter salt to patients with nephrosis or chronic nephritis.

The dosage of ammonium chlorid is 5 to 15 grams daily. No damage to kidney structure is to be anticipated, but a dangerous degree of acidosis may ensue. The action of these remedies is variable, and the reason for this variability is not fully understood.

Keith and his associates believe that the combination of an acid-forming salt with an organic mercury compound increases the efficiency of each. There is no doubt that such a combination of diuretics will frequently result in an extensive mobilization of retained body fluid. Especially brilliant results may be obtained in the treatment of edemas of extrarenal origin, such as those occurring in cirrhosis of the liver, or of heart failure in which digitalis may have failed to act. In patients with damaged kidneys, the mercurials are capable of inflicting grave structural damage. Hence, in the light of our present knowledge, it would appear that the use of mercurial salts should be restricted to patients whose kidneys are relatively intact.

Urea is a substance which may act as an efficient diuretic, especially when administered intravenously and in relatively large dose (20 to 80 grams daily). Restriction of fluid intake is recommended in connection with the administration of urea. Marked nitrogen retention is regarded as a contra-indication of its use. Urea is said to be more useful for the maintenance of the edema free state than for the production of diuresis in patients in whom extensive accumulation of fluid is already present. Its continuous use over long periods of time has been recommended.

Thyroid.—In nephrosis there is present a low basal metabolic rate, edema, and at times demonstrable structural alteration of the thyroid gland. Reasoning from analogy, the administration of

thyroid substance or thyroxin has been recommended in nephrosis; but the reasoning appears unsound, since it is probable that the edema of nephrosis does not arise as a result of thyroid deficiency. Nor, are the physical characteristics of nephrosis edema similar to those of myxedema. Finally, published case reports do not appear to be sufficiently encouraging to induce one to employ these substances on empirical grounds.

Treatment of cerebral symptoms as occurring in acute glomerular nephritis especially in children.—A method of treatment which was originated and developed by Blackfan and his associates, and which consists in the intravenous and oral administration of magnesium sulphate, promises to be one of the most important additions to therapeusis in recent years. This form of treatment is based upon the author's belief that the cerebral symptoms arise as a result of increased intracranial tension caused by cerebral edema. The magnesium sulphate is administered in an attempt to abstract water from the tissues into the blood vessels, with subsequent excretion through the bowel. The application of the method is as follows: a one per cent solution of magnesium sulphate is injected intravenously in one arm while the blood pressure is followed in the other. The solution is injected at a rate of 10 c.c. per minute. A total of 175 to 200 c.c. is given to patients from four to ten years of age. Such injections are repeated at 12- to 24-hour intervals if indicated by the continuance of high blood pressure and of cerebral symptoms. The results have been favorable in all but the terminal or medullary cone phases of this type of uremia.

The authors warn against the danger of lumbar puncture in the presence of edema of the brain as they have shown that incarceration of the brain in the foramen magnum may occur.

As an attempt to lessen the tendency to cerebral edema, Rowntree has recommended the elevation of head and shoulders of patients with acute nephritis.

My experience with the method of Blackfan is limited to observation of the results as shown in a single case. The patient, a boy of 8 years, was admitted to the service of Dr. Frank W. Donley at St. Francis Hospital, Pittsburgh, September 11, 1929. He was edematous and partially comatose; convulsions were frequent and severe; blood pressure was elevated (150/120); the urine showed the presence of blood, albumin, and casts. Twenty minutes after an intravenous injection of magnesium sulphate, a convulsion occurred. There were no subsequent convulsions. His blood pressure fell to 104/75. Symptoms soon disappeared.

(c) Relief of Circulatory Failure

The association of heart failure with kidney disease is frequently observed and this association is not accidental. It depends upon the degree in which the heart, larger blood vessels, and capillaries participate in widespread tissue changes in which kidney structure is involved. Under these circumstances, heart failure is combated in accordance with the general principles that govern the treatment of impaired circulatory function. In edema, as occurring in nephrosis or chronic nephritis, it may be impossible to determine whether the accumulation of fluid is due to impaired kidney function or to a failing heart. Therefore, it is advisable to try the effect of digitalis in the presence of intractable edema as occurring in the course of kidney disease. Occasionally a brilliant result may be obtained.

(d) Administration of Dextrose

This substance can supply calories without inflicting injury on the kidney; it can replace depleted glycogen stores; it may aid as an efficient diuretic.

In acute nephritis, dextrose is a useful food, and in all other forms of kidney disease where, as a consequence of vomiting or coma, food cannot be given by mouth, intravenous administration of dextrose is indicated.

Titus has administered dextrose with apparent advantage in the toxemias of pregnancy as occurring with or without associated kidney lesions. Young, Burt, McCague, and other genitourinary surgeons give dextrose intravenously in the preoperative preparation of patients with obstructive nephropathies. Bannick believes that the intravenous administration of dextrose is capable of controlling the oliguria and toxemia in certain cases of acute and subacute nephritis, and that it may bring about temporary improvement in patients suffering with uremia secondary to chronic nephritis. I have administered dextrose intravenously to many uremic patients. While it has not been employed to the exclusion of such other methods of treatment as venesection, catharsis, and sweating, I am convinced of its great value as a therapeutic measure.

To avoid unfavorable reactions, care is essential in the choice of the preparation used and in the methods of administration. The technic of Titus and his coworkers has given satisfactory results as applied in their obstetrical clinic. These authors conclude that their investigations have apparently established the optimum daily intravenous dose of dextrose at 75 grams for an average sized adult. Single doses repeated

one to three times daily are preferable to prolonged injections. The most beneficial results seem to follow the intravenous administration to an adult of 75 grams of dextrose in a volume of 300 c.c. (25 per cent) during a period of 90 to 100 minutes. Titus uses *celerose* as his preparation of choice. Ampules of dextrose solution are marketed by several manufacturers. These ampules are recommended for use in small hospital services, emergency work, and private practice.

Conclusion

I have attempted to state the principles that govern the application of measures applied in the hope of preventing kidney disease, of avoiding reinfection of damaged kidneys, and of combating some of the unfavorable conditions which arise as a result of altered kidney function. The application of these measures has been described.

Opinions here expressed may be subsequently modified or reversed; but even reversal of opinion is not necessarily final. With allowance made for errors in observation and judgment, it is still apparent that a forward movement is in progress which has resulted in an improvement in methods as employed in treating patients with kidney disease.

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REFERENCE

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ABSTRACT OF DISCUSSION

Of Symposium on Certain Aspects of Nephritis

Roy R. Snowden, M.D. (Pittsburgh, Pa.): Before mentioning the clinical aspect of the subject I wish to pay a tribute to the paper of Prof. Richards. I was first attracted to his work by a series of articles appearing in the *American Journal of Medical Science* in 1921, and have followed his researches since with increasing admiration. For many years our understanding of the physiology of the kidney was at a standstill. Prof. Richards, by the elaboration of the extraordinary technic, which he has developed with such great patience and skill, has opened up a field that will yield us great assistance in the clinical knowledge of nephritis. His name will stand preëminent in the field of those who have opened our understanding of the physiology of the kidney.

First, nephritis is a common condition either as a primary disease or a complication. The kidney is a very delicate organ, with highly specialized secretory epithelial cells, and it is very susceptible to the slightest irritating toxin, functional strain, or circulatory disturbance. Therefore, in practically every pathologic condition, whether it be infectious, metabolic or circulatory, the kidneys are more or less affected and in many instances this secondary nephritis is sufficiently severe to become an important or even predominant element in the clinical problem. An analysis of 450 consecutive office cases was made to determine the incidence of nephritis. These patients were all ambulatory, and most of them suffering with chronic conditions. The analysis revealed the following: Primary nephritis: severe, 5.3 per cent; mild, 9.3 per cent. Secondary nephritis: severe, 28.4 per cent; mild, 6 per cent. No nephritis, 50 per cent; orthostatic albuminuria, 1 per cent. These figures show clearly the frequency and importance of nephritis in chronic conditions.

Second, a point which deserves special emphasis is the importance from the standpoint of treatment and prognosis of recognizing the nephritis as early as possible. The kidney is peculiar in that despite the highly specialized nature of its secretory epithelial cells, it possesses remarkable powers of regeneration. This is evident from both clinical observation and laboratory studies. Thus, in experimental nephritis produced by the administration of a renal irritant, the nephritis may be pushed to the point at which microscopic examination of one kidney will show marked inflammatory reaction, including extensive sloughing of the tubular epithelium; and yet after withdrawal of the toxin the remaining kidney will promptly recover and subsequent microscopic examination will reveal almost no traces of damage. Likewise, in clinical experience we are all familiar with the prompt and complete recovery that may occur in severe acute nephritis. Therefore, we should never forget this ability of the kidney to regenerate—provided the cause of the damage can be removed. If, however, the irritation and inflammations continue over a prolonged period of time, then scar tissue is made and recovery is no longer possible. To discover nephritis in its early stages it is usually necessary to look for it by an examination of the urine. This is particularly the case in the milder, or so-called chronic nephritides. To wait until the appearance of the clinical signs and symptoms, which are always due to marked failure of function, is to wait until the kidney is so interlaced with scar tissue that there is little chance of even arresting the process.

In the minds of the laity, nephritis or Bright's disease is a hopeless condition and its diagnosis an announcement of approaching death. We physicians can take a more optimistic attitude toward nephritis, provided we make the diagnosis early. To do this, we should remember the susceptibility of the kidney to any pathologic condition that may be present and we should look for the evidences of nephritis in the urine and not in the clinical signs and symptoms.

Milton Goldsmith, M.D. (Pittsburgh, Pa.): I wish to ask Dr. McEllroy to explain the method of determination of the functional capacity of the kidney in the cases reported.

Dr. McEllroy (in closing): In the chart presented I showed that the method employed was that which was suggested by Dr. van Slyke. It is rather difficult to interpret any kidney function tests in the terms of absolute kidney function. They are really relative figures, indicating, in other words, the capacity of the kidney to eliminate certain substances, and the index of impaired function is usually based upon the rate of elimination of certain constituents of the blood. When we speak of renal functional tests, we should bear in mind that a single test may not give a true index of all aspects of the dysfunction.

Orthopedic Surgery*

LOW BACK PAINS

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In the beginning of this paper, the writer desires to stress one most important and outstanding fact in the diagnosis of the cause of low back pain, viz., that it should not be approached from the standpoint of some definite lesion as the causative factor but with an open and unbiased mind. The physician must recognize that while in some cases one definite condition may be discovered which can be regarded as the chief cause of the disability, there will exist in every case, contributing factors which at times may prove to be of greater importance than the basic one and unless these are recognized and properly evaluated, he will fail in his efforts to secure relief for his patient. Among these accessory conditions may be mentioned age, occupation, injury, weight, height, physical health, and many other factors that concern the general welfare of the individual in his or her station or social position in life. In other words, it is a composite and complicated condition and should be looked upon as the local expression of a concrete lesion or as the resultant of a group of factors whether functional or pathologic. The other papers will present two of the outstanding factors met with in the lower spine while this paper will attempt to present several other factors which may be found in the regions of the lower spine and the pelvis and the writer hopes it may bring out a discussion that will be both amplifying and enlightening to all concerned.

It is a trite but true saying that failure to afford relief in lower back pains is due more frequently to neglect in the study and examination of the patients than to anything else and, therefore, the first essentials are to investigate carefully the history, strip the patient and examine the spine with the patient in the standing, sitting, and prone positions so as to note any external and clinical evidences of interference with function. Having completed and charted the results of this examination, one may begin the analysis of the case and as this analysis proceeds, any other study such as blood, urine, metabolism, roentgenography, or other laboratory aids that may be indicated and available, should be carried out. Do not strive to make a hasty or prompt diagnosis, but rather endeavor to find the correct solution even though it requires two or three days of time and study, and never lose sight of the fact that the pain is a symptom not a disease. For practical diagnostic work there are four classes of causes: (1) reflex; (2) anatomic; (3) traumatic; and (4) inflammatory.

The reflex pain may come from a chronic appendix or from irritation or infection of the prostate gland and seminal vesicles or from rectal disease and in the female, it may arise from uterine and ovarian disturbances though this is not common. I have seen several patients with pain in the right sacro-iliac region caused by low grade appendicitis and with the removal of this structure, the pain disappeared. Its characteristics are that it is not constant, there is no tenderness over the seat of the pain, and there is a history of one or more attacks of appendicitis. Careful palpation in the right iliac fossa usually elicits some tenderness over the site of the appendix and the blood count may show a slight leukocytosis. If the patient is a man of 20 or more years of age and the pain occurs in the sacral region rather than in the sacro-iliacs or above them, one should always inquire as to the recent or remote infections of the genito-urinary tract. If there has been such an infection at any time, the prostate and seminal vesicles should be investigated for pus. One must carefully massage these structures to express their secretion, and then make a microscopic examination to determine any possible increase in the number of pus cells. The normal number of pus cells is from 6 to 10 to the field, and if these are increased to 20, 30, or more, it indicates irritation or actual infection in these structures. One does not find gonococci present but some other type of organism will be found which has been implanted at the site of the original inflammation and the most common germ is the staphylococcus. It may continue the inflammation indefinitely unless most carefully and thoroughly eliminated. Disease of the rectum usually directs the attention to that part before the pain begins in the back so needs no discussion.

The second group of causes is the anatomic. This does not include the functional and static conditions to be discussed by Dr. Willard but refers to anatomic abnormalities about the fourth and fifth lumbar vertebræ and their processes, about the sacrum and the sacro-iliac joints and in the ilia. This group is extremely large because of the great frequency of these changes in this region. About 85 per cent of all individuals have some anatomic abnormality or variation in this portion of the spine and pelvis (Pfahler) and while in the large majority of persons, the abnormality causes no symptoms, yet it is always a potential factor for trouble as it is a weak link in the chain, of which we remain

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in ignorance until great strain is thrown upon it. It is like the blow hole or air pocket in the spindle of the automobile which is not recognized until an overload or severe jolt occurs and the part snaps at the weak spot. The argument of the patient that "it never hurt me before" avails nothing for the simple reason that the contributory factors were not present before in such manner as to bring about the necessary breaking force. Among these abnormalities may be mentioned alteration in size of the vertebræ as compared with the size and occupation of the individual; change in the shape and size of the lateral processes, especially those of the fifth lumbar vertebra, causing pressure on the ilia or sacrum or limiting mobility of these parts on one or both sides; alteration of the shapes of the articular facets both of the bodies and of the articular processes; variation in the height of the iliac crests so that a man may have a female or low type of pelvis while a woman may have a male or high type; marked lessening of the size of the sacro-iliac joints so that the supporting bridge becomes too small to carry the increasing weight or sustain the strain of function incident to one's occupation; an occult spina bifida involving one or more of the posterior arches of the spinal segments; variation in the number of the lumbar vertebræ, some patients having six while others have but four, and the resulting alteration of the mechanics of this region from the lengthening or shortening; and lastly, the one-half of the fifth lumbar vertebra together with its lateral process may take on the complete characteristics of a sacral segment and be completely fused with the sacrum while the other half with its process will be perfectly normal and entirely free from the sacrum and ilium. On the other hand, one-half of the first sacral segment may present complete freedom from articulation with the sacrum and ilium and possess all the characteristics of a lumbar vertebra so that on that side there will be six lumbar vertebræ and but five on the other. Some clinicians are inclined to doubt or deny that these abnormalities play any part in the production of pain and disability, but experience with many of these patients and the complete relief which has followed correction of the condition convince me of a possible direct etiologic relationship. I, therefore, feel that any or all of these anatomic variations are potential for pain when the proper conditions arise and must be considered in the diagnosis and treatment of the trouble. The roentgenograph is the only certain means for making a correct diagnosis and one must insist upon a careful and complete study and not rely upon one plate however good it may be. These plates must be clear and sharp, showing details of structure and relations. Stereoscopic films are the best of all.

A young man, aged 25 years, fireman on a railroad engine, developed pain in the right lower back and after several months of intermittent attacks was forced to give up his work. A roentgenographic study showed that an enlarged lateral process on the right side of the fifth lumbar vertebra was impinging upon the ilium. Sufficient of the process was removed to relieve pressure and the pain disappeared almost immediately and in 3 weeks he was back at his job and has never had another attack.

A young man just out of school started work as a carpenter and soon began to experience pain in the lumbosacral region on bending and twisting so that he became unable to continue his work. A roentgenographic study showed an occult spina bifida of the fifth lumbar and first sacral segments and no evidence of disease or other abnormality. All other possible factors were eliminated by the examination and operation was advised for correction. A small bone graft was placed from the fourth lumbar spine down to the second and third sacral spines and in contact with the incomplete spines of the fifth lumbar and first sacral segments. He made a complete recovery and in five months returned to his work and has had no further trouble.

Many similar, typical cases could be detailed illustrating the benefit and relief by correction or elimination of the local abnormality. Those doubting the relationship will urge that the operations merely eliminated strain from faulty posture or strain upon ligamentous structures and that the same results could have been obtained by nonoperative means. It is not denied that strain is the potent factor in these cases and the fact that relief follows the correction of the abnormality, provides the proof of their causal relationship and, further, it is a basic principle in all mechanics that any structural deviation or disturbance will, so long as it is present, remain potential for disability, hence the necessity for correction.

A man or woman may reach full maturity with bony structures in normal proportion to their size and body weight but as time passes they take on weight or follow occupations of more strenuous character, while the bony skeleton has not increased proportionately and under strain of work and overweight pain begins in the lower back. The roentgenograph will demonstrate a supporting structure entirely inadequate to the work demanded and the ligamentous and muscular strain gives rise to pain which may offer difficulties for correction. Naturally sup-

port for the spine is needed but in the case of obese individuals it is extremely difficult to apply. One should, therefore, consider treatment of the obesity, alteration of occupation, careful supervision of diet, and the application of some form of support that the patient can wear, but under any circumstances these patients are difficult.

Another type of case may have pain in the sacro-iliac regions and a study of the case will show small joints as compared with the size of the pelvis and spine. In women, it may become apparent after childbirth. Such cases are relieved by a properly fitted corset with reinforcing belt, and the secret of success in these cases lies in the fitting of the corset and belt. The indications for this support are just as accurate and important as the use of digitalis in cardiac trouble, morphia in its field, and all other drugs in their places and the doctor should not leave their application to the instrument makers and corsetiers as they are often utterly unfit to take charge of the corseting of these patients.

I shall not take up further the matter of sacro-iliac and lumbosacral strain as that will be covered in Dr. Willard's paper from the standpoint of posture and its complications, except to stress the fact that any of these abnormalities may be and frequently are the basic or underlying and potential factors which permit strain in this region. It is axiomatic that any disturbance of balance in any part of the body is potential for pain because of the resultant strain on related tissues and parts, hence the importance of the early recognition and elimination of any and all factors that tend to affect or upset bal ance, especially as they involve the lower spine. A common condition of this type is a short leg or some abnormality or disability in one leg. A physician's son, aged 17 years, and athletic, was forced to give up his efforts for the school team because of pain in the lumbosacral region on any attempt at running or similar sport. Nothing could be found in the spine by examination or by roentgenograph and his general health was excellent. When stripped, the spine showed a very slight deviation to the right side and careful measurement of the legs revealed one-quarter inch shortening of the right leg. The heel of that shoe was raised one-eighth inch and the left one lowered one-eighth inch and the pain disappeared. He again took up athletics by wearing a quarter inch wedge in the heel of the right shoe and was successful with his team. Adults with shortening from an old fracture or a stiff hip in a faulty position are prone to develop pain in the lumbosacral region because of strain and in such cases equalization of the legs to restore balance gives relief from pain.

Probably the most common cause of pain offered by the patient is direct trauma and it is frequently found to be the true one. Pain follows directly after the injury and is continuous. It may be local or may be referred along the sciatic nerves. For years we have heard much about sacro-iliac dislocations and strain following injuries and the medicolegal side has assumed tremendous proportions. It is true that one may see a true dislocation of the sacro-iliac joint but it is rare and is accompanied by a degree of disability and anatomic disturbance that renders the diagnosis unmistakable. It is the cases of so-called subluxation which prove most confusing. Orthopedic surgeons are coming more and more to the opinion that this form of trouble is not nearly so common as was formerly supposed and that it should be looked upon as caused by strain of the ligamentous and other joint structures rather than a subluxation. Here, again, one realizes the importance of the inclusive concept of the problem. The actual differentiation between traumatic strain in the sacro-iliac and the lumbosacral articulations is, in many cases, an absolute impossibility in spite of the attempts of many writers and clinicians to tabulate definite characteristics for each. The reason for this appears to lie in the fact that both joints are frequently involved at the same time because of the intimate functional and anatomic relation between the two. Furthermore, the age at which these disabilities occur is coincident with other factors to be mentioned later so that while injury and strain may have been the exciting factors, the continuing ones may be entirely different and unrelated. This fact should be recognized more generally by those dealing with these cases from the industrial angle as it is of so great importance both to the patient and to those legally responsible for the accident or its consequences. One rarely sees sacro-iliac or lumbosacral strain in the young when growth and development are progressive and repair is active, but after maturity arrives and vital processes begin to wane, the ill effects of any or all factors, whether functional or organic, become more and more apparent and increase steadily with the years. As internal immunity or resistance is lowered, the disability increases.

Another condition closely related to trauma is the disturbance of relationship between the fourth and fifth lumbar or the fifth lumbar and first sacral segment which is described as a slipping forward of the upper body upon the lower, following a fracture of the laminæ or articular process or elongation of these structures secondary to intra-osseous changes and is called spondylolisthesis. It is an uncommon con-

dition and the diagnosis is not easy but depends mainly upon the roentgenograph, though in older persons the development of the "saddleback" and a deep fold in the skin on each side of the body above the top of the ilium are quite constant and characteristic. The most satisfactory method of treatment is operative.

We now arrive at the point at which we recognize that sacro-iliac and lumbosacral strain are fairly commonly met with, yet the diagnosis of such conditions should not be made until all other conditions have been excluded, especially as concerns the chronic types. In other words, the diagnosis is one of elimination and this brings us to the consideration of the fourth type of case, viz., the inflammatory. Dr. Yount will present the characteristics of the tuberculous process so it will not be necessary to consider it. The other group of cases is the nontuberculous or those produced by: (a) direct infection of this region by pyogenic organisms; (b) toxins from infected foci in other parts of the body; and (c) toxic products of disturbed metabolism of biochemical character, the exact nature of which we do not understand.

First, direct infection of this area by pyogenic organisms is almost invariably of acute character and may be either primary or secondary. In either case, the symptoms are those of infection, are continuous, and present a degree of disability out of all proportion to the other types of involvement. Fever, pain, local or referred, increase of the leukocytes and a bedridden patient direct the attention to an acute infection. The roentgenograph is not of much value in the early stage of such an infection, but the blood count and fever record are most valuable. Also it occurs more frequently in younger subjects than in older ones.

The next type includes the very large class of adults who have passed 30 years of age. Many of them give a history of strain or unusual exertion with the sudden onset of acute pain in one or both sides of the lower back. Recovery occurs after a few days or weeks of rest and then the attack is repeated and each one grows a little more prolonged. Relief usually follows some supportive treatment but is not permanent. This case requires most careful study. Local examination may not reveal anything. The blood picture may show a leukocytosis of 8000 to 10,000 or a leukopenia of 5000, and the roentgenograph may or may not show beginning deposits about some of the joints, according to the age of the patient and the length of time the symptoms have continued. There may be irritation of the periarticular structures sufficient to cause pain but without calcium deposits. It has been my experience, however, that these deposits are most commonly found earliest at the lower edge of the sacro-iliac joints and if any are observed at this spot, it strongly presumes irritation of similar character about other joints which present pain but show no deposits. By these methods if one can establish the presence of irritation, it is useless to treat the local condition as this is but a manifestation of a constitutional disease. The attention should be focused on the search for the cause and here the field is almost limitless as we are dealing with the great problem of arthritis and its etiology which includes both the infectious and the third division, viz., disturbances of metabolism whether of dietetic, digestive, assimilative, or of ductless gland origin. This subject is too great for consideration here and its introduction is merely for the purpose of stressing the frequency with which the arthritic conditions are met in low back pains and also the intimate relation existing between traumatism and strain or any mild inflammatory process in or about a joint and the onset of arthritis. The former conditions localize the latter and very commonly the pain of the former is replaced by the latter. The treatment therefore depends upon what one can discover in the field of etiology. Local treatment is purely palliative. Heat usually gives temporary relief. Baths likewise relieve by promoting elimination as do also laxatives, but removal of the cause is the only curative measure. Supports also give comfort and in older persons, fixation of the spine by a bone graft has proved of great value.

Conclusions

1. Low back pain is not a disease but is a symptom of local or constitutional disturbances.

2. The etiology may be concerned with strain, injury, infection, or metabolic disturbances.

3. The pain may be direct or referred.

4. It is at times impossible to distinguish between sacro-iliac and lumbosacral pain as the two joints are often involved at the same time.

5. Failure to give relief is most commonly due to failure to properly examine and diagnose.

6. An open mind is the first essential to investigation and the examiner should avail himself of every possible aid in the study of the patient, including roentgenographs, blood, urine, metabolism, etc.

7. The four most common underlying factors are congenital malformations, disturbed balance, trauma, and infections.

8. Each case presents its own problems and each period of life its own etiologic factors.

Medical Arts Building.

TUBERCULOSIS OF THE SPINE

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The deformity kyphosis, hunch back, which is most frequently the result of tuberculosis of the spine, should be considered a preventable deformity. If it were possible to detect and diagnose, in the early stages, every case of tuberculosis of the spine and promptly to institute treatment, tuberculosis kyphosis would never be seen.

In most cases, the progress of the disease is slow and the early symptoms are mild. Pain at the site of pathology is always present. It is aggravated by movement, consequently, there is limitation of motion in the area affected. This limitation of motion is the result of muscle spasm and is not due to actual damage to joint structures. The presence of tuberculous foci elsewhere in the body is discoverable in many patients. In others, no positive evidence of tuberculosis can be found. In the latter case of negative general findings, the suspicion of tuberculosis of the spine should not be abandoned until the spinal lesion is proved to be nontuberculous. A repeatedly negative tuberculin reaction is of definite diagnostic value. A positive reaction is of no special value in diagnosis. The blood picture of low total white count and relatively low polymorphonuclear cells is confirmatory evidence.

To delay treatment until a positive diagnosis is made is a great mistake. To state it briefly, I would say that any child who complains of pain in the back for more than a week should be placed in recumbency until it is determined whether or not the pain is due to one of the minor transient conditions which cause pain, such as, myositis, sprain, postural strain, contusion, or if it is possibly due to one of the more serious conditions involving bone and joint structure, i. e., tuberculosis, epiphysitis, or osteitis (mixed infection). In any condition, except trauma, involving bone in childhood, little help can be found in roentgenographic study until about 20 to 30 days have elapsed following the onset of symptoms; hence treatment should not be deferred in a suspected bone lesion in a child until positive x-ray evidence is manifest.

From the point of view of an orthopedist who is called upon constantly to treat advanced tuberculosis of the spine with marked destruction of bone with deformity, I wish to make a plea to the general practitioner to spend less zeal in attempting to make an early positive diagnosis in spinal lesions, but to insist on two very simple axioms in treatment in every case of suspected bone lesion of the spine, namely—rest and recumbency. On account of the insidious progress of bone destruction, the lapse of time alone is necessary to positively establish a diagnosis. If the superincumbent weight of the body above the lesion is removed by recumbency and irritation is prevented by rest, the most potent factors in the production of deformity are removed until such time as diagnosis is made. May I suggest the following plan in the management of back pain in childhood: (1) Suspicion of serious lesion, in all cases that show symptoms for longer than one week. (2) Recumbency and rest, pending diagnosis. (3) *Positive diagnosis.* (4) Special treatment as indicated after diagnosis is made.

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DIAGNOSIS AND TREATMENT OF POSTURAL DEFORMITIES OF THE SPINE

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Only the physical disabilities caused by faulty posture of the spine in adults come within the scope of this paper, and of all the ailments to which the human body is heir, not one causes so much bodily inefficiency and discomfort as poor posture. This condition is not a disease, although it may result from or predispose to or accompany disease. Poor posture is primarily the result of our inability to use efficiently, in our present erect position and with our sedentary habits of life, a motor mechanism which was originally planned for the horizontal position of the four-footed animals. We are quadrupeds set on end. In the horizontal position the spine and its ligaments would support the body well, but in the erect posture the curved, flexible spinal column can be held correctly only by the pull of the elastic muscles. Because of this flexibility of the spine and its supports our body can readily be placed temporarily in almost any position and as readily be brought back to normal; but if these abnormal positions are persisted in, so that the supporting muscles become overstretched and weakened, and the ability to return to normal be, therefore, lost, then faulty posture with its resultant train of symptoms may be said to have become established.

To know poor posture when we see it, we must be able to understand good posture. No hard and fast definition can be made for every type of individual. We may say, however, that in good posture the body weight is carried well forward on the balls of the feet, the legs are straight, the pelvis is held back at an angle of

50 or 60 degrees to the horizontal, the abdomen is retracted, the chest elevated, with the shoulders flat and the head held erect. This position brings the line of balance of the body at the front of the astragalus and through the anterior knee-joint. At the hip it passes just posterior to the hip-joint and just anterior to the sacro-iliac axis. It crosses the bodies of the vertebra at the dorsolumbar junction and again at the cervicodorsal junction to the mastoid process.

To give the maximum bodily efficiency the back must be flexible, and for this reason our spinal column must be curved in at least one plane. These curves occur normally in the anteroposterior plane without any lateral deviation. The curves are forward in the cervical, backward in the dorsal, forward in the lumbar, and backward in the sacral region. To insure the minimal amount of muscle strain in holding this curved column, these curves in the normal adult should show a variation from the straight line of only about one inch anteriorly in the lumbar and about two inches posteriorly in the dorsal region. Poor posture consists of any persistent exaggeration of these anterior posterior curves or any lateral curvature.

By far the greatest number of postural defects consist in the persistent exaggeration of one or more of the normal anterior-posterior spinal curves. These defects usually begin in childhood or adolescence but are very common in adults, especially in women, either as a primary or as a residual defect. In the examination of these cases a clear picture of the defect can be obtained only by exposure of the whole body. By far the most usual type is the increase in the anterior lumbar curve and the posterior thoracic curve. This combination is usually known as *sway back* and *round shoulders*. Either of the two curves may predominate, but are usually found together. With these occurs an increased forward tilt of the sacrum, the pedestal on which the flexible spine rests. In certain individuals, the normal curvatures, especially of the lumbar region, may be decreased or flattened and this may be accompanied by some degree of forward bending of the dorsal spine. A third type (the so-called *flat back*) is a sharp forward angulation of the low lumbar spine with hyperextension of the upper lumbar and flattening of the dorsal spine. Any of these abnormalities of the main weight-bearing system throws the whole organism out of adjustment, and widespread, and often severe derangements of the other bodily organs and systems appear, which are basically due to the spinal changes.

The causes of the static deformities are very varied, but primarily they depend on loss of muscle tone of the main supporting muscular groups—the extensors of the hips and the extensors of the back. This loss of muscle tone may be due to acute illnesses, prolonged mental or physical fatigue, or poor hygiene. Bad habits in standing or sitting, caused by occupation, are also a distinct etiologic factor. Poor posture may be secondarily caused by disease of the spine, as in arthritis, or in the muscles themselves, as in infantile paralysis, and adds its symptoms to those of the primary disease.

In the clinical study of these conditions, we must take into consideration the variations in anatomic structure of the body. The most casual observer should realize that human anatomy varies tremendously, but all the variations can be grouped into three general classes. According to Goldthwait, who is unquestionably the pioneer in emphasizing the importance of postural spinal defects, the three main, physiologic types of back are: (1) the normal with medium height, full-rounded thorax, high diaphragm, flat lower abdomen, and well drawn back shoulders; (2) the long back type with light bony structures, flat narrow chest, unusually long lumbar spine, and increased flexibility of the whole body; (3) the broad back, heavy type, with large, short skeleton, excessive fat throughout the body, short neck, large wide chest, deep abdomen, and short lumbar region.

The postural defects vary in these different types. In the normal, the forward and downward dragging shoulders, with relaxed abdomen and lumbar lordosis are most usually seen. In the long back type, the above malposition, or the flat-back type, are most common, while in the heavy type, moderate lordosis with rounded dorsal spine is predominate. In these varied malpositions of the spine, examination will show that there is no permanent spinal deformity. In the prone position, or even in the erect position, voluntary correction is possible. Spinal motions are free and unrestricted, except for the relatively mild limitation of motion when the muscle pain is severe.

In addition to these objective signs of malposition, there are usually added many subjective symptoms, caused either primarily by the static defects of the spine or secondarily by the dysfunction of the other bodily organs from which the patient seeks relief. It should be remembered that the thoracic cage and the abdominal cavity change their shape with every spinal motion and that any prolonged spinal abnormality must cause secondary changes in these areas which markedly effect the organs contained in them.

In the back itself pain is the most persistent symptom. This occurs over the muscle areas ad-

jacent to the spine rather than on the spinous processes. It may center in the upper muscular attachments in the neck, or more commonly in the lumbar muscles and in their attachments on the sacral and sacro-iliac region. The most characteristic point is that the pain is increased by prolonged weight-bearing and is decreased by rest. Tenderness is usually found in the painful areas, but is relatively mild compared to the degree of pain. In addition to this pain which is due to the overstrain of the muscles and ligaments, we usually find more or less radiating pain along the posterior sensory nerve tracts. The intercostal and lumbar nerves either on one side or both show marked pain and tenderness in their distribution. Acute pain in the lateral and anterior chest wall from this source may often cause a mistaken diagnosis of inflammatory lesions of the chest, but the absence of intrathoracic signs should clear the diagnosis. Carnett has drawn attention to the pain and tenderness of the lateral and anterior abdominal walls which again have been so often diagnosed as a sign of intra-abdominal disturbance. Careful examination will localize posterior root pain as a condition of the abdominal wall and not of the abdominal cavity.

Irritation of the lower lumbar nerves may cause radiating pains through the genital regions and the areas supplied by the sciatic nerves. The marked relationship, however, between pain and prolonged weight-bearing together with the objective signs of bad posture offers at least a clue to the correct diagnosis.

The flattening of the chest and the interference with thoracic contents will often cause symptoms of shortness of breath, cardiac pain, etc., which must be most carefully distinguished from organic disturbances of these organs. The lessening of the costal angle, the loss of tone of the anterior abdominal muscles, and the resultant pendulous lower abdomen greatly favor the occurrence of visceroptosis, and this condition adds its symptoms of gastric and intestinal disturbance.

In the treatment of these conditions it is necessary to consider not only the posture of the back but all the associated conditions that go with it. Bad posture is not a purely spinal defect, it involves the whole motor mechanism of the body. The circulatory and respiratory systems, the gastro-intestinal and genito-urinary tracts are all affected, and in the planning of individual treatment each portion must receive due consideration.

It is obvious that all general measures that promote good muscle tone, normal circulation, and good digestion are of value. Tonics, outdoor exercise, heliotherapy, and good hygiene are general aids in treatment; but specifically our problem is to build up the muscular supports of the body so that good posture may be attained and retained. In all cases the basic causes of muscle weakness should be sought for and corrected. Bad habits of posture from whatever cause should be eliminated. In the more severe cases, it is often necessary to give the overtired muscles a chance to rest and relax before the building-up process is started. Absolute rest in bed for days, often weeks, is necessary to relieve the pain and muscle spasm. In some cases the correct alignment of the spine and thoracic and abdominal viscera can be obtained only by the application of a posterior plaster shell or bed, extending from head to thighs. As the muscles assume more normal tone, stimulation by heat and massage adds to the rapidity of recovery. At the same time voluntary muscle training in the prone position to teach correct habits of posture can be started.

In the milder cases, or after the bed treatment, corrective braces or corsets, to hold the body while in the erect position and to relieve the still weakened muscles from overstrain, can be successfully used. These braces may vary greatly, but basically are planned to give a firm back support from pelvis to lower ribs with a belt around the lower abdomen to correct the lumbar curves and improve body balance. In some cases an upper extension of the brace to hold the thorax and shoulder girdle in position may be necessary. These braces in themselves often overcome the major symptoms of pain and digestive disturbances, but they do not overcome the underlying muscular faults, and, therefore, must be considered only as an episode and not as the whole treatment.

By far the most important treatment is voluntary muscle exercise which must be continued until correct posture becomes habitual. Exercises should not only build up the necessary muscle structures but also rid the patient of bad postural habits and teach correct posture. These exercises should be done at first under the direction of an especially trained gymnastic teacher who can guide the patient both as to the type and the amount of exercise needed. When the routine of exercise has become fully established, then the patient may carry out the program in the home, returning occasionally for supervision by physician and physical therapist, The amount and type of exercise vary so considerably with each patient that it is impossible in a short paper to cover the details of this part of the treatment. It can only be said that these muscular exercises aim to strengthen mainly the

muscles of the respiration, the anterior abdominal muscles, and the extensors of the back and thighs. The full coöperation of the patient is absolutely necessary. He should be made to realize that only by prolonged exertion on his part, can cure be obtained. Bad posture is not one of those human defects that can be placed entirely in the doctor's hands. One cannot leave one's motor mechanism at a doctor's office as at a garage, and have it put in first class condition while one waits. The doctor and the physical trainer are of immense help, but only through complete teamwork between patient, physician, and physical therapist can full results be obtained.

Lateral deviation or scoliosis is a postural defect that has its origin in a vast majority of cases in childhood or adolescence, and is seen in adults only as a residual deformity, or as a secondary symptom of disease or injury. Two main types are seen: (1) postural; and (2) structural. The first type, postural, appears as a single curve to one side or the other of the whole spine, without rotation of the vertebra. The curve can be forcibly corrected and there is no deformity of the thorax. In addition to the curve, the most noticeable objective signs are inequality of the shoulders, the shoulder on the convex side being high, prominence of the hip on the concave side and increased space between the body and the pendent arm on the concave side. There are usually no subjective symptoms, and for this reason this type of curve may remain undiagnosed and untreated until the deformity becomes very severe. The causal factors are usually poor muscular tone plus unilateral skeletal defects, such as short leg or dislocated hip, irregularity of vertebral growth, empyema, disease of the bone such as rickets, or diseases of the muscles, such as infantile paralysis. Many cases have no obvious underlying physical defect and are caused by prolonged bad habits of posture assumed either at home or as a part of the patient's occupation.

The second type, structural, usually appears as a double or even triple curve of the spine. It is the secondary stage of postural curvature in which the deviation becomes fixed and cannot be entirely corrected by manipulation. The vertebral bodies become deformed, becoming wedge-shaped in the anteroposterior view. The vertebræ also rotate, and this deformity causes a backward displacement of the ribs on the convex side with marked prominence of the scapula overlying the ribs. The causes of structural scoliosis are practically the same as those of the postural type.

The treatment of the first group consists in removal, whenever possible, of the etiologic factor, in the application of some form of brace or stiff corset to hold the body in the correct position and in long continued gymnastics to strengthen the muscle supports of the spine, especially those on the convex side of the curve. The exercises are preferably given under the supervision of a trained physical therapist and continued until the muscles adequately hold the spine in the correct position.

The same treatment holds good for the milder structural cases, but, in addition, the stiff, unyielding curvatures must be forced back towards the normal by the pressure of properly applied plaster casts or by lateral traction in the recumbent position. The more severe types of structural curvature with marked rib deformity offer little hope of cure. Increase in the deformity can be prevented by proper bracing or by operative fusion of the spine. Cosmetically, the deformity of the thorax can be improved in certain cases by section of the deformed ribs. Unfortunately structural scoliosis can practically never be entirely corrected, although the postural type offers a good prognosis if treatment is thoroughly carried out.

The care of these patients is a responsibility that the orthopedic surgeon must assume, but the diagnosis in the vast majority of cases must be made by the family physician and the responsibility of recognizing these cases in the early or postural stage, when treatment offers a good chance of functional cure, depends absolutely upon him.

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ABSTRACT OF DISCUSSION

Of Symposium on Orthopedic Surgery

CARSON COOVER, M.D. (Harrisburg, Pa.): There has been an increase in the number of papers on back pain. The first report apparently appeared in England, in 1854, and there were only occasional articles until about 1905, when Goldthwait's paper popularized the diagnosis of back conditions and the diagnosis of luxation of the sacro-iliac became so frequent. Since then many papers have appeared and they have spread to the other specialties, as the gynecologist estimates back pains produced by retroversion and pelvic conditions. The proctologist has even put in his figures. The neurologists have blamed some of their conditions on scoliosis. The urologists are attributing some back pains to the urinary conditions, and the general surgeons, especially Dr. Carnett, have been recently urging the interpretation of midline abdominal tenderness, and tenderness over the superior-anterior aspect of the sacro-iliac joint as being due in some cases to a chronic sprain of the vertebræ rather than to a chronic appendicitis, as emphasized some years ago by Morris, or to ureteral stricture as developed by Hunner. Evolutionarily nature seems by sacralization to be trying to add the fifth lumbar vertebra to the sacrum and possibly we

will be able to realize how numerous cases of sacro-iliac luxation or arthritis are when the surgeons who are performing sacro-iliac arthrodesis operations give us their reports.

There is no doubt that the sacro-iliac and the lumbo-sacral joints have had a tremendous strain thrown on them as a result of the erect posture. Allen reminds us, and the charts of Dr. Willard show, that the lumbar vertebræ and the sacrum do change. In quadrupeds standing erect the lumbar vertebræ and the sacral axis are almost vertical. This same position is almost equally true in a human in the sitting position and this explains why persons with exaggerated antero-posterior curves get relief by sitting with their legs raised.

To make an exact etiologic diagnosis, as prescribed by Dr. Rugh, is often laborious and sometimes an unsatisfactory task. Wentworth has devised an elaborate history sheet for classifying cases with low back pain and whether this will be practical time alone will show. The questionnaire of the Orthopedic Society was not very satisfactory as shown by the replies. At any rate, it will require much more study and time before a point is reached at which the etiology can be cleared up and the treatment of this subject thoroughly worked out.

Arthur G. Davis, M.D. (Erie, Pa.): Dr. Rugh has gone most thoroughly and comprehensively into the etiology and diagnosis of low back pain. Low back pain is just about as comprehensive as he has presented it. If out of any number of cases, however, presenting themselves for treatment for low back pain one were to tabulate the greatest number in any one category, the class of case most frequently encountered is the one that depends upon pressure on the nerve trunk in the intervertebral foramen in the lumbosacral region. Goldthwait, Putti, Wilson, Danforth, and others have demonstrated that the lumbosacral cord makes its exit through the intervertebral foramen between the fourth and fifth lumbar vertebræ and the fifth lumbar and sacrum. The lumbosacral foramen is the smallest of the lumbar foramina, yet the smallest foramen gives exit to the largest nerve trunk. Normally there is just sufficient room in this foramen to allow for the circumference of the nerve. Anything, therefore, that affects the size of this foramen is likely to give rise to sciatic or gluteal pain.

Five principal factors independently, or in combination, may serve to reduce the size of the foramen, these are: (1) arthritis; (2) trauma; (3) lumbosacral anomalies; (4) postural lordosis; and (5) faulty mechanical use of the body. The most frequent combination is that of injury imposed upon preëxisting arthritis or arthritic potential. Arthritis should be considered present until eliminated. Trauma and arthritis appear to work together to produce the chronic back following an injury. Dr. Rugh has pointed out the frequency of lumbosacral anomalies, which cause abnormal mechanical strain. If combined with one or more of the other factors, the anomalies produce the lame back. The most frequent anomaly appearing in these backs is that of asymmetry of the posterior facets, in which one facet is directed anteroposteriorly and the other is crescentic, the mobility being on the side of the one with the anteroposterior direction. Postural lordosis is very frequently contributory because of the universal adult slump posture, which in and of itself is sufficient to increase the acuity of the lumbosacral angle, thus diminishing the size of the lower foramina sufficient to cause nerve trunk pressure. The final factor is that of improper mechanical use of the body. To illustrate, one person will stoop to lift a weight by bending the spine, whereas another person will bend the knees and hip-joints and keep the spine rigid so that it is in the best position to withstand the mechanical stress.

Orthopedic surgery is divided into several camps in the matter of low back pain, its causes and treatment, much as general surgery is divided in the matter of gall-bladder disease. The two main camps are those who think in terms of sacro-iliac cases and those who see mainly lumbosacral cases. Certainly one cannot explain pressure upon the lumbosacral plexus by dislocation of the sacro-iliac joint. If backache is due to sacro-iliac cause, it must be from irritation of the joint itself, as in arthritis or tuberculosis of the sacro-iliac. In the case of the lumbosacral foramen, however, nerve pressure by way of distinct funiculitis is very easily accomplished.

Treatment is based upon flattening of the lumbar spine, thus opening up the particular foramen involved. The flattening of the spine is accomplished through bracing, postural correction, and sleeping positions with knees and thighs flexed, and the fact that this treatment yields a greater number of successful results than other mechanical treatment, proves that in this class of cases the mechanical etiology is as stated. The treatment of the arthritides is necessary.

In tuberculosis of the spine, we who have as our special task the treatment of Pott's disease in children, realize that at least 75 per cent of the deformities of the spine in advanced tuberculosis are preventable. Treatment of Pott's disease is particularly prolonged, requiring frequently several years to arrest progress. It would be infinitely more helpful to see these patients in their beginning stage before investing in this prolonged treatment, as Dr. Yount has pointed out.

Regarding postural defects, the presentation of Dr. Willard is entirely adequate and he has well illustrated the detrimental effects of posture mechanically, and the effect upon the internal organ system. I should like to point out in this connection the observation of Goldthwait and others, namely, the paralyzing effect upon the diaphragm resulting from slumped posture. The diaphragm loses part of its mobility because of the collapse of its skeletal attachment.

CUTANEOUS MANIFESTATIONS OF SYSTEMIC DISORDERS*

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All physicians should be acquainted with the common skin eruptions. As one dermatologist expressed himself, "The skin is the mirror of the body," and it is essential that we, as dermatologists should not become lax and forget general medicine. The proper diagnosis of a skin eruption may lead to a hitherto unsuspected systemic disease and serious future trouble might be avoided if the relationship between the cutaneous manifestation and the systemic disease were discovered, so that both ailments could be treated at the same time. The constitutional diseases in which we may find objective signs in the skin will be mentioned in this paper and the lesions briefly described.

*Read before the Section on Dermatology of the Medical Society of the State of Pennsylvania, Erie Session, October 1, 1929.

In typhoid fever an eruption appears on the abdomen, chest, and back, from the seventh to the ninth day. It is composed of small, slightly elevated, rose-colored spots that disappear on pressure. It comes out in successive crops over several days. Sudamina and miliaria are common. The former are pinpoint to pinhead in size, translucent, pearl-like vesicles; and the latter reddish pinpoint to pinhead in size, papules and vesicles, accompanied by sensations of itching and burning. Herpes simplex may occur in one to three per cent of all cases.

In erysipelas, the eruption is bright red in color, hot to the touch, swollen, indurated, and sharply circumscribed. The area is at first smooth and glazed, but later it is covered with minute vesicles or blebs. The face is by far the most frequently affected region.

In lobar pneumonia, herpes simplex may occur in about forty per cent of the cases.

In many cases of cerebrospinal fever a blotchy purpuric eruption appears on the entire body. Herpes facialis is also frequently observed.

There are two forms of leprosy: (1) tubercular leprosy and (2), anesthetic leprosy. The two forms may coexist, constituting the mixed type. The tubercular form commonly begins as smooth, reddish, yellowish, or brownish, bean-sized infiltrated macules which may disappear, or after a variable duration, develop into tubercles. The latter vary in size from a pea to a hazelnut, are yellowish, reddish-brown, or bronze-tinted, and are most commonly situated about the face. The forehead is particularly apt to be affected, the thickening and the exaggeration of the folds of the skin producing the so-called leonine expression. Leprous tubercles persist often for a long time. They may disappear by absorption or ulceration, the latter occurring for the most part about the fingers and toes. The first cutaneous manifestation of the anesthetic type consists usually of an irregular outbreak of blebs, which rupture and are followed by pigmentation. Instead of blebs, there may develop erythematous spots of a bluish-red or yellowish-brown color, later becoming yellowish or brownish. These spread by peripheral extension, at the same time healing in the center. Over these areas there is at first hyperesthesia; later this gives way to anesthesia, so that the prick of a pin cannot be felt.

The skin lesions, produced directly or indirectly by the tubercle bacilli or their toxins, are many but only those in which we find true systemic tuberculosis will be discussed. Tuberculosis cutis orificialis was the first definitely recognized form of tuberculosis of the skin and, for a short time, thought to be the only true cutaneous tuberculosis. The lesions are indolent, oval or circular, shallow, discrete, reddish-yellow, granulating ulcers, often covered with thin crusts, occurring about the mucocutaneous orifices of patients affected with internal tuberculosis and with the development of miliary tubercles in the adjacent mucous tract. They may be situated on the lips, about the edges of the nostrils, around the anus, or on the labia, sometimes extending into the vagina. There may be one of several ulcers which spread slowly and show no tendency to heal. As a rule, the ulcers are small, but occasionally they reach considerable dimensions. Acute disseminate miliary tuberculosis of the skin may follow the exanthematous fevers in children. It is characterized by an eruption of quite small papulopustules and red nodules scattered about on the face and extremities in variable numbers. The eruption usually appears very suddenly and shows a decided tendency to come out in successive crops. After a time many of the lesions undergo spontaneous evolution and may disappear without leaving any trace, or they may ulcerate, forming small, round, punched-out ulcers. Practically all the cases have been part of a general miliary tuberculosis or have been associated with tuberculous meningitis. A considerable portion of them have followed measles or scarlet fever in children. Lichen scrofulosorum is characterized by the occurrence of indolent papules, situated chiefly on the trunk and occurring in tuberculous subjects. The lesions are millet-seed to pinhead-sized papules, firm in consistency, and flat topped. They vary in color from that of a normal skin to light or vivid red. The papules are occasionally surmounted by minute scales, rarely by an equally small pustule. At the outset the lesions are isolated. Later they tend to arrange themselves in coin-sized patches. Often there is a crescentic outline formed by the aggregation of individual lesions. After a variable duration, usually many months, they begin to undergo slow involution and eventually completely disappear, leaving nothing more than a slight and transient pigmentation.

In scarlet fever the eruption appears at the end of the first or beginning of the second day, on the neck and chest, and rapidly spreads to other parts of the body. In the face it is frequently confined to the forehead and cheeks, while the lower parts of the nose, the lips, and chin appear pale by contrast. It is, as a rule, a bright scarlet, and on close inspection is seen to be made up of innumerable fine red dots which in well-marked eruptions may, after a time, give way to a profuse redness. If the skin is rapidly stroked with a fingernail or pencil, a white line shortly appears which remains for a

minute or more. The eruption lasts for five to seven days and is followed by branny desquamation.

The most common skin eruption which may occur in malaria is herpes simplex, usually labial. It occurs almost as frequently in malaria as in pneumonia. Occasionally a severe urticaria has been encountered.

The cutaneous manifestations of syphilis are so varied that it would take up too much time and space to fully describe them all. Is is said that if one can recognize syphilis in all its forms, one has a fair knowledge of medicine. If a physician can diagnosis syphilis of the skin, he has a good knowledge of dermatology. These lesions may simulate those of many other dermatologic conditions, and in order to make a differential diagnosis, one must be acquainted with them. You are familiar with the initial lesion or chancre which usually occurs on the genitals or extragenitally on the lips, tongue, fingers, or nipple in women. It begins as an oval, superficial erosion with a smooth red surface which, after a time, becomes covered with a grayish membrane, or as a circumscribed superficial or deep ulcer with sharp-cut edges and indurated base, the Hunterian chancre. It is not accompanied by any pain and the neighboring lymph glands are always swollen. The eruption in the second stage appears between the first and fourth month following the chancre, and is characterized by a symmetric arrangement, a coppery color, polymorphism, and an absence of itching. In this stage the eruption stimulates many other dermatologic conditions. The tertiary eruption appears in from six months to several years after the primary sore. It is, as a rule, localized, tubercular, gummatous, or ulcerative in form. The lesions are deep-seated and destructive and when healing takes place, the scarring is always smoother than anticipated.

In smallpox, the eruption develops on the third or fourth day, appears first on the forehead and wrists, and spreads rapidly over the entire body. It begins as small red macules, which are generally transformed into smooth, hard papules. At the end of two days the papules become clear vesicles, centrally depressed, and divided by septa into several compartments, a single puncture failing to empty them. The vesicles gradually acquire a yellowish tinge and by the seventh or eighth day of the disease are converted into tense globular pustules, surrounded by red areola. In three or four days, the pustules dry up or break, forming reddish-brown crusts, which emit a sickening odor and excite intense itching. In the course of two or three weeks, the crusts or scabs separate leaving permanent pits or pockmarks.

In varicella or chickenpox the eruption which appears within the first twenty-four hours is at first maculopapular, but within a few hours it becomes vesicular. The vesicles are usually sparse; are most abundant upon the trunk; come out in crops; are superficial and variable in size; are unilocular; and are rarely umbilicated. Since these vesicles come out in crops over a period of several days a multiform eruption is noted, which is characteristic. In two or three days the vesicles are dry and yellowish, and thick crusts are formed. After they fall, erythematous spots remain for awhile. Occasionally scars result from infection, particularly on the face.

In measles, the eruption appears about the third or fourth day on the face and rapidly spreads over the trunk and extremities. It is composed of small, dark-red, velvety papules, which tend to form crescentic borders. In three or four days the eruption begins to fade, and a branny desquamation soon follows. In dermatology, it is essential that the mouth be examined as well as the skin since many eruptions can be diagnosed from the mucous membrane picture. In measles, bluish-white specks surrounded by red areola may be seen in strong daylight on the mucous membrane of the cheeks and lips one or two days before the skin eruption appears. These are called Koplik's spots.

An eruption which resembles that seen in both scarlet fever and measles is observed in German measles. It appears on the first or second day, and varies considerably in its character. Sometimes the rash is composed of pinkish-red, scarcely elevated papules, which are more or less discrete; in others the rash is bright red and diffuse, like that of scarlet fever. A very constant factor and one which is helpful in making a differential diagnosis, is marked swelling of the postcervical glands.

Industrial workers who handle materials containing arsenic, over a long period of time, are subject to chronic arsenical poisoning. In addition to constitutional disturbances, an eruption may appear on the skin. The commonest types are erythematous and pigmentary. Herpes zoster is occasionally produced by arsenic. Keratosis or wartlike growths may develop and in rare instances epithelioma.

Pellagra is a chronic, constitutional, endemic disorder, characterized by symptoms referable to the cutaneous, gastro-intestinal, and nervous systems. The eruption consists of bright, dark, or livid erythema which affects chiefly the exposed parts, such as the face, neck, and hands. The

skin is swollen and burns and itches. The skin manifestations present three stages: (1) congestion; (2) thickening and pigmentation; and (3) atrophic thinning. The disease tends to disappear in the winter and return in the spring.

In young persons suffering from diabetes mellitus and also in patients who have glycosuria of hepatic origin, one may see an eruption called xanthoma diabeticorum. It is characterized by whitish or yellowish globoid papules with reddish base, resembling pustules. Dilated capillaries are often noted over the papules, giving them a reddened appearance. On some occasions the presence of this eruption will be the first indication to the physician that he is dealing with a systemic disease. Diabetes mellitus may be responsible for a lowered resistance of the skin to pyogenic micro-organisms, and a tendency to pustules and boils.

In dermatology there are many eruptions for which we have no definite cause. We know, however, that several eruptions are, to a certain extent, caused by disorders of the digestive tract. Urticaria or hives, with which you are familiar, is one. The very common acne vulgaris seen as comedones, papules, and pustules on the face, chest, and back, associated with a greasy skin is another. In rosacea, a disease that occurs more frequently in women than men, and usually after the twenty-fifth year, we find an achylia in a fair percentage of cases. This eruption occurs exclusively on the face and is usually most marked over the nose and contiguous regions. The color of the skin in the affected areas varies from bright to dull red, or may even be purplish. Small red papules are associated and often the ordinary lesions of acne vulgaris, exhibited as nodules and pustules, are added. The blood vessels become dilated and new ones develop. Hypertrophy of the tissues sometimes takes place, particularly of the nose producing the bulbous and lumpy nose called rhinophyma.

There is one disease which some dermatologists consider to be due to a toxemia of intestinal origin and others to a rheumatic toxemia produced by a specific organism. It is called erythema multiformi. The eruption, which comes out more or less suddenly, may consist of macules, maculopapules, vesicles, and blebs, one type of lesion as a rule predominating. Any part of the body may be involved, although the disease exhibits a marked predilection for the backs of the hands and feet, forearms and legs, and less frequently the face and neck. The lesions are at first bright red, but later become bluish or purplish in color.

There are several dermatologic conditions caused by some disorder of the nervous system. Herpes zoster is an acute specific disease of the nervous system with secondary cutaneous changes. It is characterized by the appearance of crops of irregular groups of pinhead to pea-sized vesicles, which follow in an interrupted manner the distribution of the nerve or nerves affected. The exciting cause of lichen planus is unknown. Nervous exhaustion resulting from overwork, worry, etc., is the most contributory factor. This disease is characterized by the presence of flattened, glistening, reddish, or violaceous pinhead-sized papules with often a slight central depression, and often an irregular or annular base. These papules are at first discrete but may later coalesce, forming rough scaly patches. The sites of predilection are the flexor surfaces of the wrists and forearms and the inner aspects of the knees and thighs. As a rule the eruption is symmetrical. Dermatitis herpetiformis or Duhring's disease is due to a toxemia of some undetermined origin. Duhring stated that the disease is due to various causes, some of which are obscure in their origin, but that the nervous system is directly responsible for the cutaneous manifestations. It has also followed infections, menstrual irregularities, pregnancy, and the puerpural state. Defective renal excretion, exposure to cold, and physical fatigue have also been cited. The disease is characterized by vesicles, bullæ, papules, or pustules, which frequently occur in special arrangement, followed by pigmentation. The areas most commonly affected are the extensor surfaces about the elbows and the sacral region, about the knees, buttocks, trochanteric and scapular regions. The appearance of the lesions in successive crops and their grouping in fairly-well defined areas is characteristic. They are usually accompanied by marked itching and burning sensations.

In certain diseases of the blood the cutaneous picture may be the first indication that the patient has a disturbance of that system. In chlorosis as well as in sterility, ovarian disorders, and tumors there can be observed at times a facial discoloration extending over the forehead and reaching nearly to the line of the hair at the scalp, in the form of a faint or a decidedly reddish-yellow or deep brownish tinge. This is called chloasma. In acute lymphatic leukemia, hemorrhages, both petechial and diffuse, occurring in the skin and mucous membranes, are frequently noted, as are also ulcerations and necrosis; the latter commonly in the mucous membranes of the mouth and nose, less often in the skin. In chronic lymphatic leukemia, lymphomatous nodules and tumors of various sizes, shapes, and colors are found in the skin and subcutaneous

tissue as well as in the mucous membranes. In myeloid leukemia these manifestations may occur but are less frequent than in the other variety. The skin in the latter variety is usually dry, lusterless, and anemic; it may be the seat of a symptomatic erythema and urticaria, with secondary complications, and occasionally true lymphomatous tumors. In pseudoleukemia cutis or Hodgkin's disease, the cutaneous manifestations correspond closely with those described in connection with lymphatic leukemia, though pruritic papules and urticaria are of more frequent occurrence. General erythrodermia, nodules, and tumors occur less often. Purpura is a condition in which there occur spontaneous hemorrhages in and beneath the skin and mucous membranes. They may appear suddenly as bright red spots some times singly or as a shower of fine points or as palm-sized areas or larger. They are smooth, reddish or purplish, nonelevated usually rather sharply defined, do not disappear under pressure, and undergo characteristic color changes, finally disappearing. The common belief is that these hemorrhages are due to the action of some unknown toxin on the capillaries or on the blood itself.

In Addison's disease the characteristic change is brownish pigmentation or bronzing of the skin. It occurs almost universally, but is especially marked on the exposed parts and genitalia, around the nipples and navel, and wherever the skin has been irritated or compressed. In myxedema there is a gradual swelling of the subcutaneous tissues, particularly of the face, supraclavicular region, and hands. The parts do not pit on pressure, but are firm and elastic. The skin is dry and harsh and the hair becomes brittle and falls out.

There are other systemic diseases in which we may find cutaneous manifestations but time will not permit me to discuss them.

Medical Building.

ABSTRACT OF DISCUSSION

Lester Hollander, M.D. (Pittsburgh, Pa.): There is an expert internist with us, Dr. Thorne, who is also a dermatologist. I should like to have him open the discussion.

John M. Thorne, M.D. (Pittsburgh, Pa.): The dermatologist and the internist should work hand in hand and coöperate in every way better than they have done in the past. There are many cutaneous manifestations caused by some constitutional cause which should be investigated before there is so much local treatment given.

Recently a skin patient was referred to me for a gastric analysis, but knowing something of the patient's history, a complete physical examination, blood chemistry and blood Wassermann tests were made before reporting.

Light should not be used indiscriminately by the general practitioner in the treatment of skin diseases. Should a dermatitis result either as a therapeutic reaction, or because of an oversensitive skin, a misunderstanding is likely to result, with a possible suit for damages.

Lester Hollander, M.D. (Pittsburgh, Pa.): Would it be imposing on Dr. Wile to open the discussion for the dermatologists?

Udo J. Wile, M.D. (Ann Arbor, Mich.): Dr. Amshel had, as he stated, a very large order when he attempted to discuss the relation of dermatoses to systemic disease. It would perhaps have been far easier for him to have been allotted the subject of those dermatoses which are not related to systemic diseases, and perhaps a very brief paper would have sufficed.

In the time that he had, he showed very graphically how closely interdependent the cutaneous pictures are upon systemic conditions.

I was very much interested in hearing that he placed dermatitis herpetiformis somewhere in the group of nervous diseases. Pemphigus still is a disease which, failing any etiologic factor, we can state is an essential dermatosis, pending the time when we can attribute it to some systemic cause.

I do not feel that way, however, about dermatitis herpetiformis. While these two diseases have a very close clinical similarity, they are widely and fundamentally different. We are rapidly coming to the view that if we cannot place pemphigus, at least we can classify dermatitis herpetiformis, and a study of this disease in its variants, would place it very close in the group of bullous toxic erythemas.

Personally, I cannot see very much difference between a severe case of erythema bullosum and certain cases at least of dermatitis herpetiformis. There are a few characteristics of dermatitis herpetiformis which seem to indicate it as a little different from the ordinary toxic erythema, first, that it is so common in childhood, and that it is associated with a certain degree of grouping. We frequently find, however, cases of bullous disease in which a grouping and pigmentation occur in which we are nevertheless satisfied from the standpoint of nomenclature that we are dealing with a discrete form of an erythema bullosum toxicum.

Possibly, we may have a mild sepsis or toxemia playing a rôle in both dermatitis herpetiformis and in bullous erythema. It doesn't seem quite the thing for dermatitis herpetiformis to be placed in the group of the neurodermatites. With regard to herpes zoster, arsenic per se, itself, can cause this syndrome. Arsenic can cause lowered resistance of the nervous system and an infectious agent which we do not yet know localizes it in the spinal cord following such lowered resistance.

Fred D. Weidman, M.D. (Philadelphia, Pa.): Dr. Amshel has given us a lengthy catalogue which, of course, is sufficient to establish once more in our minds that there is this connection between skin and interior and, as he said, the list could be very much extended.

Dr. Amshel does not stand sponsor for the position of all these dermatoses. He quotes only the current thoughts concerning the position of lichen planus among the dermatoneuroses. In a discussion by Dr. Graham-Little at a meeting of the American Dermatological Association in connection with a symposium on lichen planus, he cited the experiences of London dermatologists during the war. He had collected statistics, or at least satisfied himself as to the incidence of lichen planus during the reign of terror which prevailed in London

during that time, and he stated that lichen planus far decreased during that period. This is something we should not overlook. He came to his conclusions on the basis of mass data compiled from a very large group of, in effect, experimental animals; that is the ideal condition that we desire when we are attempting to make deductions on clinical circumstances. Certainly, such an experience should prevail over the experiences of this or that isolated dermatologist who has simply had the opportunity, say, of knowing what conditions were in a small community in which the individuals he happens to have seen may or may not have been under nerve strain. Lichen planus should be reëxamined, or at least held sub judice as to its position among neurologic dermatoses.

ABRAM STRAUSS, M.D. (Philadelphia, Pa.): It has always been my opinion that there was a distinct etiologic difference between erythema multiforme and dermatitis herpetiformis for in an experience with some hundreds of cases over the last four or five years, I have noticed that those cases of true erythema multiforme will yield very readily to the injections of mercury, whereas, cases that eventually turn out to be true dermatitis herpetiformis will not yield to any extent at all. That has always made me feel that there was a distinct etiologic difference between the two diseases.

DR. WILE (in closing): I did not suggest a single etiologic factor for erythema bullosum and dermatitis herpetiformis, but merely a classification for both, which would place both in the group of the toxic erythemas.

The erythema caused by the ingestion of phenolphthalein has a different etiologic basis from that produced by antipyrin, yet both conditions are properly classified under the head of toxic erythema. In this connection, perhaps my original statement was misunderstood.

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*Symposium on the Middle Ear**

THE MIDDLE EAR AND ITS PROBLEMS

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PHILADELPHIA, PA.

The problems of the middle ear, which anatomically include the tympanic cavity, eustachian tube, and mastoid cells, must obviously present too broad a field for adequate study in a single paper. The tympanic cavity is therefore selected as the stage for discussion of four important problems: (a) management of middle ear infection; (b) analysis of progressive deafness; (c) etiology and mechanism of tinnitus; and (d) physiology of otalgia and atypical neuralgia. Tubal and mastoid relations are constant and frequently enter the picture. The study of even these four phases leads one into such an amazing intricacy of comparative anatomy, mechanical factors, pathologic variation, acoustic physiology, and congenital contribution, that the limitation seems unfair to the title of the paper. A score of problems are present, each one individually important.

As suggested by Fetterolf in his undergraduate course of lectures, for its relative size the mucous-lined tympanic cavity is responsible for more human distress than any of the other air-containing cavities of the human body. Its connection with infection, deafness with its associated disorders, vertigo and tinnitus, pain both localized and atypical, warrants its discussion here. Those who follow will perhaps solve some additional problems in circulatory and labyrinthine relations.

From the morphologic standpoint, three tympanic areas stand out: the tympanic membrane, the ossicular chain, and the mesial surface of the tympanic cavity—the latter geographically including the promontory, round and oval windows, prominence over external semicircular canal and covering of the facial nerve.

This mesial surface, in boundary position directly opposite the tympanic membrane, is vulnerable to traumatic injury of direct wound or rough treatment in removing foreign body, in immediate contact with infected fluids of middle ear abscess, much aggravated by the presence of thinned wall or dehiscence and readily subject to injury in unskilled handling of the paracentesis or incisional knife. The eustachian tube opening and entrance to the mastoid antrum are too familiar landmarks to be more than cited.

MANAGEMENT OF INTRATYMPANIC INFECTION

The initial problem here is the accurate interpretation of the tympanic membrane. If etiology is evident, as in nasopharyngeal infection and the exanthematous diseases, with definite bulging of the infected membrane, the decision is a simple one, but given an infant with atypical pneumonia, uncontrollable diarrhea, or even general debility with descending weight chart and nonresponse to every feeding formula or blood transfusion, the focal search here by consulting otologist may be one of great judgment. In the presence of a fairly tranquil drum membrane, the common advice "when in doubt, incise" may not always caption good medicine. In spite of experimental indication to the contrary, there is always danger of a chronic discharging ear from unnecessary exposure to canal infection and too careless irrigation.

In a doubtful ear, adequate illumination is paramount. With this, presence or absence of the ossicular landmarks can be recognized, and the phases presented by the short process of the

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malleus—determining point in the diagnosis of intratympanic pressure. While an infant cannot verify painful pressure over the mastoid antrum or aid in distinguishing external canal pain on movement of the auricle, the dilated vessels on the tympanic membrane and along the malleus handle are an important aid. If a drum membrane has an irregular surface from old catarrhal change, the light reflex will be modified or absent and cannot be depended on for diagnosis. Mackenzie has noted a fine dividing line, marking the initial periosteal invasion of adjacent mastoid before the fullness in the upper outer quadrant has fully developed. It should be remembered that a mastoiditis may be present before tympanic symptoms are clear.

Unless these indications of changed topography and other symptoms of intratympanic tension obtain, it is safe to assume that this is not the one focal area responsible for the systemic disorder; observation rather than surgery is in order.

Acute Suppurative Stage

If we assume that an adequate incision has been made, the routine care is still a problem. We are dealing with a cavity whose normal outlet is the pharyngeal orifice of the eustachian tube; a cavity so closely lined with mucous membrane epithelium that this constitutes the periosteal layer, in which organized patches of exudate are but a step from erosion and subsequent bone necrosis. Its thinned walls not only favor absorption but dehiscence in tegmen and floor adjacent to jugular bulb frequently lead to intracranial invasion. Its contents under pressure readily seek the iter ad antrum of the mastoid.

Would not a logical solution be some such procedure as this: guard against immediate danger by incision, then, analogous to the method of relieving the pathologic larynx by tracheotomy until it can function alone, concentrate on the restoration of normal tubal drainage. Not only palliative but surgical treatment of the nasopharynx is justifiable as in Emerson's freedom in combining an adenoidectomy with mastoid operation. It is assumed that local treatments of value will be followed; not mere ward routine, but treatments resulting from daily study. It is scarcely necessary to enter here the shopworn controversy over dry and irrigation methods.

Chronic Suppurative Stage

Aschoff and Fuld have recently reported middle ear findings in 100 children who died from various diseases but had not previously registered any definite clinical symptoms of otitis. Four-fifths of these children, from 2 weeks to 5 years of age, had otitis media, and in 77 per cent pneumococci were found. Consensus of opinion would be loathe to accept this as a universal average—even though their adult series of 100 as check for postmortem changes found otitis but rarely. This report is, however, instructive as a problem study. With such a background it is not surprising that the chronic suppurative stage is so tenacious and resistant to treatment.

For the purpose of this paper a study of the case records at the Children's Hospital in Philadelphia for the first six months of 1929 was made, and this in relation to the chronicity of discharging ears and otitis media prior to mastoid operation. The dispensary treatment records would show far greater chronicity range, but lack of constant oversight gives less value to averages.

In a series of 51 simple incision cases, 28 closed promptly and permanently, 23 continued drainage for two weeks or longer. In a series of 62 mastoidectomies, the tympanic membranes were opened in 27 cases, average time prior to operation 16 days; 23 cases had spontaneous rupture, with a history of chronic discharge from 2 weeks to a year or more prior to operation. In 10 emergency cases, the tympanic membranes were not incised prior to operation and 2 cases were not fully recorded. These groups are too small to be valuable in establishing an average but do evidence the problem's importance both in treatment and in character of surgery. It must be confessed both these investigations and hospital surveys argue for greater freedom in tympanic incision and radical procedure in mastoid operation.

In the chronic suppurative stage we are dealing with a cavity increasingly filled with exudative granulations, polypoid protrusions, perhaps cholesteatomous masses from ingrowing canal epithelium, an infected attic area so obscured by the ossicular and tympanic ligaments that its drainage may be merely a tortuous sinus.

Reports by Wagers and others indicate that conservative measures, including mercuric solutions, colloidal silver, ultraviolet rays and ionization, even in most careful hands and upon cooperative adult patients, scarcely cure more than half and that with the most assiduous routine care.

A dangerous type of suppurative otitis media is that which has intermittent periods of activity and rest—in an adult almost forgotten during a long interim, which may be long on the point of intracranial invasion or, as in one of the writer's recently reported cases, has been insidiously contributing to an unrecognized brain abscess

for an indefinite period. This seemed not unlike the latent ravages of the streptococcus mucosus capsulatus.

Problem of Progressive Deafness

A considerable portion of the more adult world is subject to a slowly increasing deafness. When this is sufficiently rapid to earn the title, progressive deafness, its etiology and possible treatment confront the otologist. It is first essential to determine the exact difference between conductive deafness, perceptive deafness, and the trophic entity otosclerosis. In the first are found definite and progressive changes in the tubotympanic apparatus with loss of lower tones and increased bone conduction; the second adds disturbance of the cochlear nerve and acoustic centers, with loss of higher tones and shortened bone conduction; in the third, the tympanic membrane may be normal, but marked changes in the ossicular chain, fixation of the stapes and degenerative changes in the labyrinthine capsule occur, with loss of hearing in all the ranges. All are attended with deafness in varying degree, tinnitus, and sometimes vertigo. While the diagnostic lines seem clear and definite, they are not actually so. Conductive, perceptive, and otosclerotic types, with their interrelated symptomatology, may all, from the outset, present a regular curve of progressive loss in hearing and be so registered on the audiogram.

Much research study has been done on differentiating these types which we are accustomed to consider distinct phases of ear pathology. The early Wrightson theory, about which there has been so much controversy, was that the impulse was sent down from the tympanic membrane through the ossicles on the principle of a mass leverage geared down to the stapes plate. This impulse was sent through the scale vestibuli and passed out with piston action upon the membrana basilaris, not necessarily passing through the helicotrema, and the reflected waves came back through the scala tympani to the round window. There are many questions involved in this, particularly that of how much direct sound impulse passes across the tympanic cavity to the round window itself; the importance of retraction in the drumhead; the mechanical displacements in the ossicular chain, and the antagonism or otherwise of the tensor tympani and stapedius muscles. Our understanding of these physical arrangements of acoustics has a direct relation to the understanding of progressive deafness.

Pohlman and his colleagues in a way attempt to disprove these forces and make a plea for consideration of a more nearly equality of both conductive and nerve deafness. In the latter case, a most brilliant study on the evidence from the acoustic apparatus in birds, frogs, and cats has been brought forth, demonstrating the single columella action in the bird, indicating that only one muscle may be necessary in the middle ear and putting grave question upon its function.

Emerson has presented a most careful review of his cases of progressive deafness with convincing arguments as to the nature of this condition. In his view, the problem phase in the perceptive or nerve deafness hinges on the theory of primary focal infection, with perceptive deafness as one of the earliest changes through direct lymphatic influence upon the cochlear nerve and acoustic centers. This places the conductive element as a correlated one, with its accessory tubal block, tympanic retraction, and intratympanic adhesions, which in final atrophic sequence may at a later stage restore an open tube. According to this view, primary effort should be made to eliminate every possible focus in teeth, adenoid tissue, sinuses, etc., as being at basic fault.

Perhaps the greatest research work in the past few years has been done upon otosclerosis, a subject on which literature has been abundant and foundation studies most untiring. It is hard to understand why some conservative otologists may acknowledge but a dozen basic otosclerotic cases in a decade of time and others find 100 or more in the practice of a year. The diagnostic features in otosclerosis are Bezold's triad—loss of lowered tones, increased relative bone conduction and a negative Rinné test, normal drum head, reddened promontory, deafness, and tinnitus. Variance in opinion doubtless hinges upon the rigid interpretation of this symptomatology. In otosclerosis, we are impressed with the great variety in therapeutic procedure and the claimed results: complicated drug administration, various electric, x-ray and radio, treatments, besides simple measures to correct endocrine imbalance.

In the last analysis, our problem is that we have a definite increasing deafness and must accept both conductive and systemic contribution to this. Routine treatment directed alone toward conductive change and constitutional measures are doubtfully effective. The review of one's case histories proves how inadequate, and therefore unwarranted, are simple routine tubal and massage treatments. It seems at least worthwhile to accept the principle of focal infection and proceed upon its complete elimination with the hope of maintaining the patient's hearing at its highest most favorable period, eliminating its further progress and if functional change in

nerve and centers has not been too definite, obtaining a prospect of considerable gain.

Etiology and Mechanism of Tinnitus

The term tinnitus aurium by definition refers to the various subjective sounds or noises intermittently or recurrently heard in functional or organic disorders of the hearing apparatus. Definitely established subjective noises may eventually become of extreme significance in the individual's life and even lead to psychologic derangement. History is replete, according to Woakes, with suggestions of its influence in great national figures—the logical sequence of middle ear involvement, vertigo seizures, and the naturally following labyrinthine tinnitus—an organic neural irritation.

Abnormalities in the following fields may cause tinnitus: (1) eustachian tube; (2) tympanic cavity; (3) external auditory canal; (4) labyrinthine circulation; and (5) neurolabyrinthine apparatus. Our problem concerns only the middle-ear contribution—eustachian tube and tympanic cavity.

Eustachian Tube

This presupposes pathology in the walls of the eustachian tube, with stenosis, temporary or permanent, somewhere in its course. Voluntary and involuntary closure may be influenced by muscular action, particularly the tensor tympani and the tensor palati. Tinnitus, audible both to patient and outside observer, is due to this eustachian tube origin, heard usually in the form of a subdued click. Measures of treatment are obvious.

Intratympanic Pathology

Ballenger[1] has aptly stated this law—"anything that interferes with the normal tension existing between the membrane tympani, ossicles, and the contents of the oval window will cause tinnitus and deafness."

This should include pressure of any fluid in the tympanic cavity, serous or suppurative, as well as congestion of the eustachian tube. Tinnitus is a constant symptom of the so-called moist catarrhal otitis media, referred to by patients as a superficial rather than a deep type, and the complex symptoms of suppurative otitis media are otorrhea, deafness, and *tinnitus*.

The secondary sclerotic changes, adhesions to the tympanic membrane and ossicular chain, ankylosis of the foot plate of the stapes, even simple inflammation of the mucous membrane in the tube and middle ear, disturb the normal tension by inducing negative pressure in the tympanic cavity; simple thickening of these structures and the walls seems etiologic.

Kerekes has made an ingenious study of the reflex in the mucous membrane of the ear. Through a large perforation, the promontory was carefully touched—on one spot noises were stronger, at another noise was different, at a third, noise was stopped. Cocain application inhibited or lessened the noise but epinephrin did not affect it. In several cases, a connection between head noises and condition of nasal mucous membrane was found.

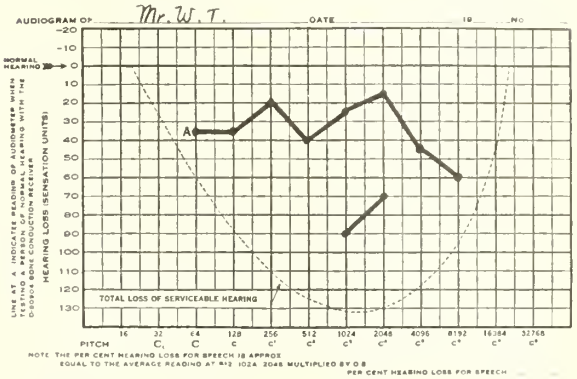

Fig. 1. Audiograms showing emphasis on conductive deafness (right side). Nerve deafness (left side).

Sturm has made an interesting observation relative to the absence of tinnitus in children. In them the aqueductus vestibule, which transmits the ductus endolymphaticus, is larger and one type of tinnitus may be due to interference with the mobility of the stapes in persons with narrow aqueducts, causing rise of intralabyrinthine pressure.

In routine otologic practice, many cases of tinnitus disappear under local and systemic treatment. Intensive medication has been given a measure of success in recent reports, such as sodium nitrite injections, mercuric chlorid, atropin locally. According to Theisen, tinnitus, a stubborn symptom of tympanic granuloma, some times disappears after its removal.

According to Retzo, weighting of the drum membrane by mercury in the canal, causes a disagreeable tinnitus, disappearing after removal. This would indicate the effect of mechanical displacement in a retracted membrane.

Ingham and Jones, in a paper on "Certain Neuro-Otologic Problems," cite the fact that one of the authors can at will produce roaring temporarily in both ears—with definite sequence in beats—suggesting voluntary control of tensor tympani, stapedius or both. The writer has long noted that by pressure on left eye (closed) a low humming vibration is heard in left ear—doubtless a circulatory pressure reaction.

An adequate explanation of the tinnitus phenomena would seem to be the appreciation by

acoustic centers either of disturbed mechanical relations in the transmissive, or neural irritation in the receptive apparatus.

Otalgia and Atypical Neuralgia

Aural pain may be discussed as (1) a simple physiologic complex; (2) symptomatic evidence of local pathology; (3) an atypical manifestation, reference in type, obscure in etiology, and often baffling in treatment.

Concerning the physiologic complex, it is not in the province of this paper to attempt to analyze the intracranial paths of sensory transmission, its bulbar and thalamic relations, and the cerebral coördination by which the pain impulse is received and registered. The local nervous mechanisms involved are the tympanic branch of the ninth and carotid plexus supplying the tympanic plexus, the facial nerve in its course through the aqueductus Fallopii, the trifacial nerve, and its gasserian ganglion. Arnold's auricular branch of the vagus to the deep external canal, and the sensory fibers from the geniculate ganglion of the facial to the chorda tympani and through the vidian to the sphenopalatine ganglion should be included. One should obviously not enter here the active clinical discussion as to the probability of transmission of pain through sympathetic nerve fibers.

Our practical problem concerns the last two groups and seeks an explanation of the local, anatomic if you please, phases of pain. This

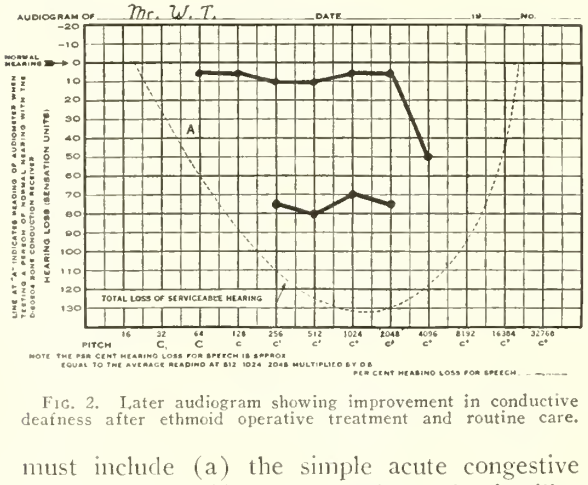

Fig. 2. Later audiogram showing improvement in conductive deafness after ethmoid operative treatment and routine care.

must include (a) the simple acute congestive earache; (b) trifacial neuralgia or the familiar *tic;* (c) the transferred pain from diseased teeth, tonsils, furunculosis of external canal, adjacent skin and glandular lesions; and, finally, (d) the pain of obscured etiology, atypical neuralgia. The common earache represents distinct middle ear pathology; doubtless a pure pressure reflex. When it can be associated with the evidence of middle ear infection, incision of the tympanic membrane gives almost instant relief. Dickie has pointed out that pain may be present even in the prefluid stage of infection and the incisional relief of the imprisoned air suffices to remove the pain. Trifacial neuralgia can be safely left to neurosurgery.

There remains the reference pain from definite and indefinite sources—the former of which may be temporarily relieved by any external and internal sedatives until the source is removed, and the latter is still the "guest without a home."

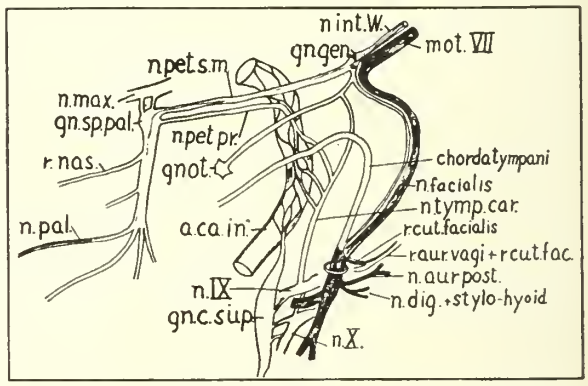

Fig. 3. From "The Mechanism of Pain Transmission in Certain Types of Otalgia," by Fenton and Larsell (with permission).

The writer has had six cases in his practice which have been well-nigh baffling; exhaustive laboratory tests, dental, sinus, and mastoid x-rays, transillumination, nasopharyngoscope and sphenopalatine injection, have all been tried, still the pain defied specialist and internist. Neurologic consultation gave the ultimatum; atypical neuralgia, subject to neither operative nor focal relief. It is, however, the belief of many, myself included, that somewhere a focal basis is present. The writer's presentation before the Laryngological Society of a relieved case of meningeal calcification may add weight.

Fenton and Larsell[2] in their paper before the International Congress, "The Mechanism of Pain Transmission in Certain Types of Otalgia," have made a notable contribution which supports this possibility. In a research study of human and comparative anatomy, they seem to have substantiated the studies of Rhinehart and others by finding in a human fetus a "ramus cutaneous facialis," joining with the auricular branch of the vagus; in their words "we have therefore demonstrated the usual conditions for reference of pain from a visceral region to a body surface, in that ganglion cells of afferent fibers of both are located in proximity in the same sensory ganglion while centripetal processes from both sets of cells pass together into the bulb."

Conclusions

1. Middle ear surgery should be guided by a minute study of the tympanic membrane.
2. A study of recent hospital records seems to justify more freedom in incision of the tympanic membrane.
3. Modern investigation is narrowing the line between conductive and perceptive deafness.
4. The treatment of progressive deafness begins in the nasopharynx.
5. Tinnitus aurium is a symptom rather than an organic entity.
6. We feel justified in believing that atypical neuralgia, with otalgic symptoms, is a focal situation.

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THE MIDDLE EAR AND ITS PROBLEMS FROM THE STANDPOINT OF VASCULAR ANATOMY AND ITS COMPLICATIONS*

WILLIAM J. GARDNER, M.D.

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Hemorrhage in the middle ear complicating fractures of the base of the skull is a well-known entity. That a somewhat similar hemorrhage may occur after certain intracranial operations has not hitherto been recorded. It was first called to the attention of the Neurosurgical Service of the University of Pennsylvania Hospital in January, 1927. A patient, convalescing from an operation for the relief of trigeminal neuralgia, complained of impaired hearing on the side operated upon. Dr. George Fetterolf examined the patient and his report follows:

The hearing is below par on the side operated upon and all the tests indicate that the deafness is of the conduction and not of the perception apparatus. Examination of the ear drum shows that in the middle ear there is a collection of dark blood which fills the lower three-fourths of the tympanic cavity. The pharyngeal end of the eustachian tube is somewhat congested. There is no blood issuing from it.

This discovery subsequently led to an ear study pre- and postoperatively of the trigeminal neuralgia cases on the Neurosurgical Service. This investigation was carried on by Dr. James A. Babbitt. An analysis of the findings reveals that of a total of 160 patients on whom an intracranial operation on the fifth nerve was performed, there was evidence of tympanic hemorrhage in 13 patients, or 8 per cent. In most of these patients, the hemorrhage seemed to be between the layers of the tympanic membrane; in others, it appeared to be in the tympanic cavity.

In an effort to discover the source of this tympanic hemorrhage, we naturally turned our attention to the vascular supply. Anatomists seem to be fairly well in agreement on this point. The following is a description according to Spalteholtz:[1]

1. The superior tympanic artery, a branch of the middle meningeal, enters the superior aperture of the canaliculus tympanicus, traverses that canal to the middle ear and appears upon the promontory.

2. The inferior tympanic artery, a branch of the ascending pharyngeal, enters the inferior aperture of the canaliculus tympanicus to appear on the promontory.

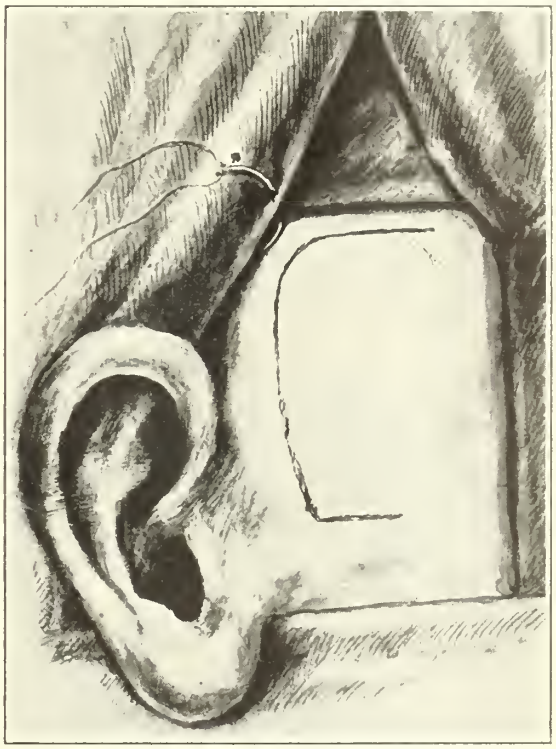

Fig. 1. Location of skin incision with relation to ear (right side).

3. The anterior tympanic artery, a branch of the internal maxillary, enters the middle ear through the glaserian fissure.

4. The posterior tympanic artery, a branch of the stylomastoid, gains access to the middle ear by way of the canaliculus chordæ tympani. The stylomastoid artery, also in its course through the facial canal, sends branches to the mastoid cells and the stapedius muscle and finally anastomoses at the hiatus Fallopii with the superficial petrosal branch of the middle meningeal.

5. The tympanic branch of the internal carotid artery passes through one of the canaliculi caroticotympanici to the mucous membrane of the middle ear.

The veins follow in a general way the course of the arteries.

* From the Otolaryngological and Neurosurgical Services of the University of Pennsylvania Hospital.

The principal blood vessels which are sacrificed in the operative approach to the gasserian

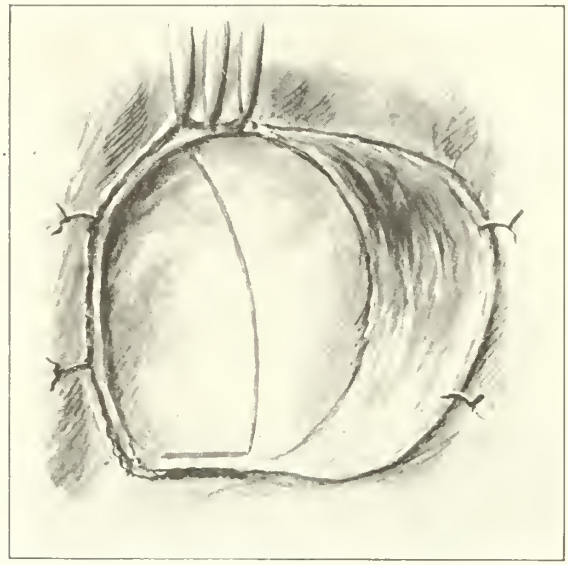

FIG. 2. Cutaneous flap reflected. Line of incision in temporal fascia and muscle (right side).

ganglion are the superficial temporal in the scalp and the middle meningeal in the cranial cavity. As the former has no connection with the middle ear we need not concern ourselves

FIG. 3. Muscle flap reflected and sutured to draperies. Dura separated from bone. Bone being removed.

with the former. A brief review of the steps of the operative approach to the ganglion will help to indicate the importance and the possibilities of the latter.*

* For details of the operative technic the reader is referred to a recent article *Radical Operation for the Relief of Trigeminal Neuralgia*, by Drs. C. H. Frazier and W. J. Gardner, *Surg. Gynec. Obst.* 73: 77, July, 1928.

The field of operation is situated immediately in front of the external ear and just above the zygoma. The skin incision consists of a short horizontal arm along the zygoma which at its posterior end meets a longer curved vertical arm (fig. 1). The superficial temporal artery is severed in making the horizontal arm of the incision.

The flap of scalp as outlined by the incision is turned forward and sutured to the wound draperies. An incision is then made through the temporal fascia and muscle (fig. 2) and the flap thus formed is turned backwards and sutured to the draperies. The exposed temporal bone is removed with a rongeur down to the level of the floor of the middle fossa (fig. 3). With the aid of an electrically lighted retractor the dura is

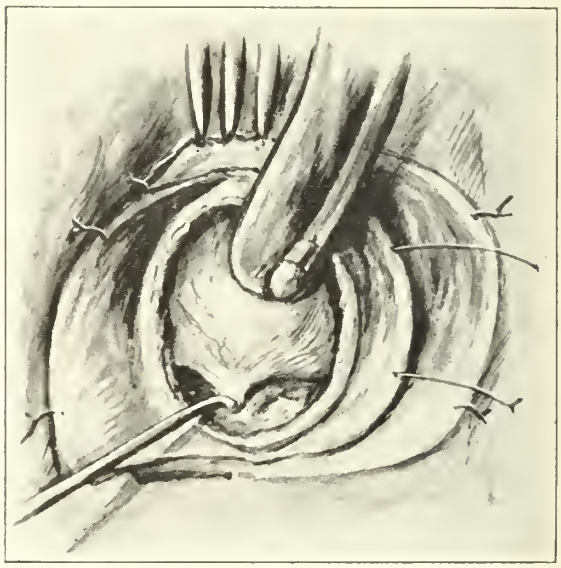

FIG. 4. Foramen spinosum being plugged with cotton to obliterate the middle meningeal artery.

elevated from the floor of the middle fossa until the middle meningeal vessels are exposed as they pass through the foramen spinosum (fig. 4). With a dental applicator a bit of cotton is forced into the foramen in order to control bleeding, after which the middle meningeal vessels are cut. This permits bloodless retraction of the dura and the exposure of the gasserian ganglion which lies to the mesial side of the foramen spinosum (fig. 5). In this approach to the gasserian ganglion the dura is elevated from the floor of the middle fossa over an area as shown in the accompanying illustration (fig. 6). The tegmen tympani and the hiatus Fallopii are no doubt frequently exposed although they are difficult to identify through the small operative exposure. The cotton placed in the foramen spinosum effectively controls bleeding from the middle meningeal

artery but in order to control oozing from the accompanying veins in the dura, it is necessary to occlude their lumen also. This is usually

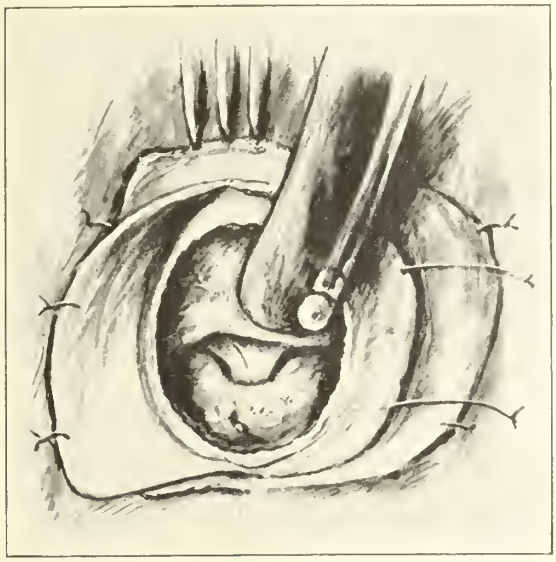

Fig. 5. The third division is exposed and the dura is being separated from the superior surface of the ganglion.

accomplished by placing small metallic clips on the dura at the points at which the veins were severed.

It is the anatomosis of the superficial petrosal branches of the middle meningeal vessels with the terminal branches of the stylomastoid artery and vein at the hiatus Fallopii that perhaps affords us the best explanation for the problem at hand. As the dura is dissected from the region of the hiatus, this anastomosis must necessarily be broken and it is fair to assume that in a certain percentage of patients the terminal twig of the stylomastoid artery will retract within the hiatus and continue to bleed. As this bleeding occurs within the facial canal there is little to prevent the extravasation from continuing along the canaliculus chordæ tympani to the tympanic cavity where it will appear as a submucous extravastion. On otoscopic examination this would be visible as an ecchymosis of the tympanic membrane. Also it is possible that the bleeding occurs, per diapedesis, owing to an increased intravenous pressure within the tympanum resulting from the interruption of the venous connections between the middle ear and the middle meningeal veins. This latter explanation was suggested and is favored by Dr. Fetterolf.

These theories, however, do not account for the cases in which there is free blood in the middle-ear cavity. In these cases perhaps a simpler explanation will suffice. It is a well-known fact that in a certain percentage of skulls the tegmen tympani is represented partly, at least, by a bony dehiscence in which instance the dura is in apposition with the mucous membrane of the middle ear. In the operative approach in such a case the membranous tegmen might easily rupture and allow blood to enter the cavity directly from the middle fossa. In an analysis of our 13 cases the evidence was in favor of an intramembranous hemorrhage in 10 cases while in the remaining 3 there appeared to be free blood in the middle-ear cavity. In one of the latter cases a fluid level was plainly visible through the ear drum.

That the hemorrhage is usually within the membrane and not within the cavity of the middle ear is suggested by the following facts. On otoscopic examination the appearance varies from a slight ecchymotic staining to a very dark drum membrane. Also the hemorrhagic appear-

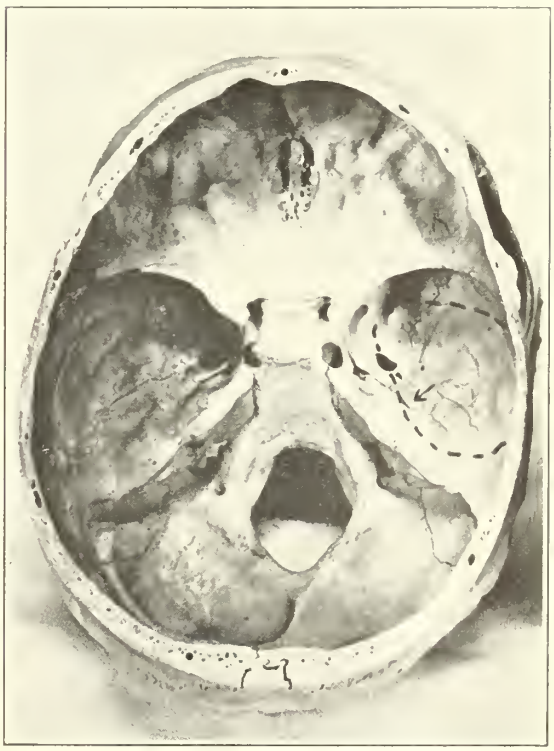

Fig. 6. The dotted line indicates the portion of the floor of the middle fossa from which the dura is stripped in the operative approach to the gasserian ganglion. The arrow indicates the hiatus fallopii.

ance does not usually affect the entire membrane. The lower quadrants are affected almost twice as often as the upper and the posterior quadrants are affected slightly more often than the anterior. Although there is usually some evidence of conduction deafness in the affected cases, it is not as marked as one would expect if it were due to free fluid in the middle-ear cavity. This is an

unsettled point, however, as the preponderance of blood stain is in the position which the postoperative decubitus of the patient would tend to locate free intratympanic blood.

TABLE I

AVERAGE HEARING RANGE

(11 cases with no postoperative hemorrhage)

	Normal Side			Affected Side		
Tuning fork	50	200	2000	50	200	2000
Preoperative (inches) .	1.6	7.8	21.	1.3	7.5	21.
Postoperative (inches).	1.3	7.2	22.	1.0	7.8	22.

Weber lateralized to affected side in 4 cases postoperatively or 36 per cent.

Table 1 is an analysis of 11 cases which were examined both pre- and postoperatively and in which there was no evidence of hemorrhage. Of these 11 cases there was a postoperative lateralization in the Weber test to the side operated upon, in 4 cases, or 36 per cent. The tuning fork tests show little change in the range of hearing after operation. This would seem to indicate that the tensor tympani muscle is not a very valuable adjunct to hearing because the motor fifth nerve, from which it receives innervation, was partially or completely paralyzed in 9 of these 11 cases at the time of the postoperative examination.

TABLE II

AVERAGE HEARING RANGE

(7 cases with postoperative hemorrhage)

	Normal Side			Affected Side		
Tuning fork	50	200	2000	50	200	2000
Postoperative (inches).	1.6	7.2	17	1.2	5.0	7.0

Weber lateralized to affected side in 3 cases or 43 per cent.

Table 2 is an analysis of 7 postoperative cases with evidence of tympanic hemorrhage. Unfortunately, in this series we do not have the preoperative hearing tests for comparison. It will be noticed that the hearing on the affected side is definitely impaired as compared with the normal side. This we must assume is the result of the hemorrhage. The Weber test, however, was lateralized to the affected side in only three cases or 43 per cent. Of the 13 patients who exhibited a tympanic hemorrhage, only 3 were subjectively conscious of hearing loss. No treatment was instituted in any of these, and those who were observed over a period of months went on to an uncomplicated absorption.

SUMMARY

1. Tympanic hemorrhage has occurred in 13 of a selected series of 160 cases; 8 per cent of intracranial operations on the fifth nerve on the Neurosurgical Service of the University of Pennsylvania Hospital.

2. The hemorrhage may consist of an ecchymosis of the drum or of free blood in the tympanic cavity.

3. The vessel probably responsible in the first instance is either the terminal twig of the stylomastoid artery as it emerges from the hiatus Fallopii, or the tympanic tributary to the middle meningeal vein.

4. The presence of free blood in the tympanic cavity is perhaps due to the rupture of a membranous tegmen tympani at the time of operation.

5. No treatment is necessary as the blood is spontaneously absorbed.

135 S. 36th Street.

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THE MIDDLE EAR AND ITS PROBLEMS FROM THE STANDPOINT OF VERTIGO

LEWIS FISHER, M.D.

PHILADELPHIA, PA.

Patients with middle-ear disease who, in addition to the many problems already discussed, also complain of vertigo, may be broadly divided into two classes:

1. Those in whom it appears in the course of a middle ear suppuration, either acute or chronic.

2. Those in whom it appears in the course of nonsuppurative disease of the middle ear, as in chronic progressive catarrhal deafness, otosclerosis, eustachian tubal obstruction, etc.

Although every one knows, in a general way, what is meant by vertigo or dizziness, yet it might not be amiss to clarify its meaning. When one is moving in space, be it in an elevator, revolving stool, automobile or what not, his various special senses keep the brain informed of what is going on and the individual thus forms concepts of the various happenings—he knows he is being lifted up or down, or he knows that his body is revolving, etc. He is conscious of these various motions because his special senses —vestibular, visual, tactile, etc., but especially the vestibular sense—are being continually stimulated by these gyrations. As long as the infor-

mation thus conveyed to the brain tells of what is truly and actually happening, the individual is perfectly contented and undisturbed—he has normal equilibration. Should he, however, be sitting quietly at his desk, for instance, and suddenly experience a feeling as though he is whirling or being whirled, or being lifted up and down, when he knows that in reality nothing of the sort is happening—then he has vertigo—that is, the brain receives messages of body motion when as a matter of fact, there is no motion. Since the vestibular mechanism is highly specialized for normal motion sensing, it is this mechanism which is probably most frequently affected in the course of false motion sensing, or vertigo.

When in the course of a middle ear suppuration, with all the trying problems attendant upon it, described by the main speaker, there is added the symptom of vertigo, we are at once confronted by several additional problems such as: Is the vertigo produced by an involvement of the immediately adjacent labyrinth, or is it produced by involvement of the vestibular mechanism intracranially? If it is a labyrinthine involvement, is it simply irritative because of the adjacent inflammatory middle ear, or has the suppuration actually extended into the labyrinth itself with more or less destruction?

The scope of this brief paper will not permit a detailed discussion of the various types of labyrinthine involvement one should suspect because of the presence of vertigo in middle ear suppurations. For practical purposes, it is well to remember that in these cases, the chief problem is after all a middle-ear problem with all the usual clinical manifestations and that the appearance of vertigo is simply an additional danger sign warning the surgeon of a threatening or actual extension of the infection and compelling him to decide without delay, the following:

1. Is the existing middle-ear suppuration to be treated surgically or expectantly?

2. If surgical treatment is decided upon, should it be limited simply to the middle ear, or should the labyrinth itself be drained?

My procedure is as follows:

When a case of middle-ear suppuration suddenly develops vertigo, a careful vestibular examination is made to determine the condition not only of the labyrinth itself, but also of the vestibular mechanism in its entirety. In some cases, the vertigo may be the first sign of an *intracranial* involvement of some sort—the infection missing the labyrinth altogether, and extending intracranially through some other route. Should this examination show evidence of an actual or threatened intracranial involvement as determined by findings pointed out by me elsewhere, the case is immediately operated upon, an attempt being made to clean up the entire middle-ear area most thoroughly. If, however, the result of the vestibular examination shows no evidence of intracranial lesion, then it is the labyrinth itself that is affected, and the course of procedure would depend upon the extent and type of labyrinthine involvement present. In the acute suppurating infections with the labyrinth itself normal, the presence of vertigo should be an indication for operation. When the labyrinth shows signs of actual impairment but not complete destruction, it is probably best to wait a while in the hope that rest and quiet might stay the progress of the inflammation and tend to localize it. On the other hand, if the middle-ear infection is of the chronic suppurative type, the problem is somewhat different. If the vestibular labyrinth itself shows normal function with or without fistula formation, it is perhaps better to pursue a waiting policy in the hope that conditions will quiet down as far as the labyrinth is concerned, for there is that danger that the trauma incident to operation might hasten the extension of the labyrinthine inflammation. Should the findings indicate actual involvement of the labyrinthine contents, the question whether the process is a destructive purulent one, or just a generalized serous one is most important, and frequently not an easy diagnosis at which to arrive. The type, amplitude, and direction of the concomitant nystagmus should be carefully studied. So long as the process is irritative the quick component of the nystagmus is to the affected side. When the inflammatory process produces total suppression of function the quick component of the nystagmus will appear to the opposite or good side. This total suppression need not necessarily be the result of a destructive purulent infection since a generalized diffuse serous inflammation will also produce total suppression of function, with spontaneous nystagmus to the opposite side. In the serous inflammatory cases, however, one can with the caloric stimulation demonstrate from time to time that there is still some function remaining, and the nystagmus will show a variability as to type, magnitude, and direction from time to time. From a practical standpoint it is well to remember that as long as there is the slightest amount of hearing remaining the patient is to be regarded as a reparable one, and should be treated expectantly. If the loss of function is total and is determined to be due to a purulent involvement, then the labyrinth itself should be drained without delay.

Vertigo in the noninflammatory types of

middle-ear disease presents not only a problem in management, but also one of interpretation as to its manner of occurrence. Since this vertigo is a false impression of body motion produced by some stimulation of either the labyrinth or its pathways and nerve centers, how then could the middle-ear mechanical distortions constituting these noninflammatory processes be productive of vertigo?

In cases of chronic progressive deafness, how could a thickening of the membrana tympani and immobilization of the ossicular chain or perhaps a fixed stapes stimulate or irritate the vestibular mechanism? As a matter of fact they do not and vertigo is not very common in these cases.

It would seem that one must agree with the views of Emerson that the vertigo in these cases is not produced by the distortions, thickenings, and fixations of the intratympanic structures but rather by infective processes the resulting toxemias of which are brought to the labyrinth or the vestibular mechanism through the medium of the blood or lymph circulation, in other words instead of considering the vertigo as resulting from the changes in the middle ear, it is better to regard the vertigo as resulting from the same infective process which originally was responsible for the middle-ear pathology.

Attempts to relieve the vertigo by local ear treatment such as massage, ossiculectomy, traction on the stapes, etc., can hardly be considered as rational. Instead, there is more promise in those measures which are directed toward the eradication of all focal infections—chiefly those in the head, tonsils, teeth, and accessory nasal sinuses.

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ABSTRACT OF DISCUSSION

Of Symposium on the Middle Ear

GEORGE M. COATES, M.D. (Philadelphia, Pa.): Possibly too much radical surgery has been done in the past in chronic suppurative cases without sufficient study being made first to determine the things for which we are operating. In undertaking the treatment of a chronic suppurative middle ear the first thing is to obtain a complete history and make a preliminary study of the case, which means a careful examination of the function of the middle ear and labyrinth to determine if the suppurative process is confined to the middle ear or has invaded the labyrinth. If the latter is true, it is more than a simple suppuration and, therefore, the hearing test is valuable to determine this point and also gives us something for comparison after we have finished our treatment.

The Wager study, mentioned by Dr. Babbitt, was undertaken to determine whether any definite form of local treatment would give better results than another. The great value of the study has been to show that any form of local treatment of the middle ear may be expected to give results in a certain percentage of cases if certain fundamental rules are followed, and the one fundamental rule is cleanliness. If the ear is cleansed thoroughly, carefully, and frequently it does not matter very much what you put in it afterwards, for you will cure or arrest a certain proportion of these cases. It varies from 30 to 60 per cent with various methods of treatment.

Before radical surgery is resorted to, vaccines may be administered. Dr. M. S. Ersner and I have found that vaccines for the treatment of middle-ear suppuration could be expected to end the suppuration, at least temporarily, in 40 to 50 per cent of the cases. The general systemic condition of the patient should not be neglected because that is of the utmost importance.

If the suppuration is not cured by these simple methods, I think radical operation is not demanded immediately. A further careful roentgenographic study will show in many cases a sclerotic mastoid without evident necrosis of the mastoid process. I am opposed to doing a radical operation on those patients who have a mastoid undergoing the healing process, or sclerosing. The operation of Tobey (who resurrected the almost forgotten ossiculectomy) in many cases will end the suppuration, whereas radical operation may not necessarily do so. If there is definite necrosis of the ossicles with dense adhesions, by cleaning out the tympanic cavity and removing the malleus and incus one can often eliminate the actual infective process. Tobey goes further in his operation and removes the overhang of the external wall of the attic and also of the aditus, opening up the mastoid antrum if it is involved. If in addition to this the eustachian tube is closed by the method of Yankauer there is a chance to cure the suppuration. Then one can go on without further difficulty to a very radical mastoid operation, but not to the modified mastoid operation which again is becoming popular, for this type of operation seeks to obliterate the infective process in the mastoid while conserving the structures of the middle ear.

MATTHEW S. ERSNER, M.D. (Philadelphia, Pa.). Dr. Babbitt called our attention to the fact that focal infection is a great factor in middle-ear disturbance. The tonsils, adenoids, sinuses, remote areas such as the gall bladder and teeth are very often the culprits for middle-ear afflictions. If an infected tooth is removed, the focus of infection will cease. There is, however, a mechanical problem to be considered and that is the dental arch and its relationship to deglutition, muscular coördination, and proper inflation of the middle ear through the eustachian tube. The eustachian tube controls the middle-ear pressure and the latter depends upon the soft palate movement putting into play the levator palati, the tensor palati, and the salpingopharyngeus. These coördinated movements are accomplished during deglutition and the maximum amount of balanced pressure through the eustachian tube is best carried out when there is complete denture. To illustrate this, all that one must do is to attempt to swallow and he will find that the maximum soft palate pressure is best accomplished when the lower jaw and the teeth press against the superior maxilla and its dental structures. Therefore, one must bear in mind that to facilitate and to maintain the evenly-balanced pressure, the dental structures must be replaced soon after extraction, otherwise there will be an imbalance on deglutition and a middle-ear disturbance caused by imperfect opening and closing of the eustachian tube. The physiology of swallowing is disturbed by disturbing the dental arch.

One of my patients consulted every otologist in the

city and when his face was x-rayed a small buckshot was found in the infra-orbital foramen, producing pressure. When the shot was removed, he recovered. It is advisable to observe the dental foramen through which the nerve passes to the lower jaw. There may be some exostosis caused by previous infection or injury. Although the teeth may be negative, there may be some pressure, and occasionally this is found by the roentgen ray. If wholesale dental extraction is done from a focal infection standpoint, we must not forget the relationship of the eustachian tube to the dental arch in the course of swallowing.

JAMES A. M. RUSSELL, M.D. (Erie, Pa.): At a recent dental meeting, Dr. Sherman Davis, of Indianapolis, said that dental caries can be controlled by diet. It has been worked out experimentally by supplying an excess of calcium in the form of calcium phosphate—ten parts calcium to six of phosphate—and giving very small doses of parathyroid. This plus vitamin C, in orange juice and tomato juice, enables dental caries to be cured in four months' time. Some of these men might work out experimentally whether a diet would have any influence in some of these cases of chronic suppurative mastoid.

DR. BABBITT (in closing): My paper was somewhat contradictory in that its early conservatism in many ways seemed to be contradicted by radical advice toward the end. The reason is that our hospital records do not satisfy us. Another reason is, I am influenced by a belief in a semi- or modified radical method, by the method of Tobey or others, something that may produce fewer unfavorable sequelæ. I am in accord with Dr. Coates' suggestion of patience in working out this treatment. We have a very good pathologist on the Otolaryngologic Service of the University who has told me that he had special success with metaphen in middle-ear treatment—using as strong as 1:500 solution in a chronic middle ear.

The suggestion of Dr. Ersner about the preservation of the dental arch is good. In discussing bone pressure he probably refers to some atypical cases. You have all had patients who made you reach the point that you wished to do a radical operation on the whole side of the face.

The great difficulty with the administration of chemical ingredients to control dental caries or other inflammation would be in getting sufficient coöperation from the patient. Patients do not like to work out their salvation by a long, painstaking routine.

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*Symposium on the Thymus**

THE THYMIC SYNDROME

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To any one who has had much experience with the various manifestations that an enlarged thymus can produce, textbook descriptions appear entirely inadequate.

In one book, for example, the manifestations are described in only three forms, namely: (a) dyspnea, either continuous or recurrent; (b) suffocative attacks; (c) stridor.

In another, the symptomatology is dismissed with the following classification: (a) pressure upon the trachea; (b) pressure upon other organs; (c) symptoms other than those of pressure attributed to thymic hyperplasia. The actual clinical manifestations are not discussed, although an excellent review of the literature is given with theories of how an enlarged thymus can or cannot exert its effects.

In still another textbook, there is a brief description of the pressure effects of an enlarged thymus upon the trachea, while other symptoms frequently seen are not even mentioned.

Of the numerous monographs on thymic disease, the one by Morgan, Rolph, and Brown, perhaps shows best how varied the clinical manifestation of the disease may be. They report their experiences with 54 cases.

Numerous authorities seriously question the etiologic relationship of the thymus to the many symptoms attributed to it. Morse, in particular, believes that many pediatrists have developed thymic obsessions, and criticizes their attitude in no uncertain terms.

This paper is a report of my experiences with 44 cases that presented symptoms in which an enlarged thymus appears to play a causative rôle. In some of these cases, however, this rôle may be seriously questioned; in others, the prompt amelioration of the symptoms, following roentgen ray therapy, seems to prove an etiologic relationship. At any rate, it is hoped to throw some light on the subject.

Before proceeding, however, it may be well to recall that at the superior opening of the thorax of a young child is the critical space of Grawitz, the anteroposterior diameter of which measures only two centimeters from the sternum to the vertebral column. Here, between unyielding walls, are contained the trachea, the esophagus, great vessels, nerves, and the thymus. Pressure upon these structures would therefore occur, should a greatly thickened or hypertrophied thymus be present. As no internal secretion has been attributed to the thymus, the many symptoms considered as due to its enlargement must be produced by mechanical effects.

Stridor is the symptom most frequently observed. It may occur only on inspiration, but usually accompanies expiration as well. It is caused no doubt by tracheal compression, and is invariably accompanied by other symptoms of thymic pressure, particularly cyanosis and dyspnea.

Stridor was present in 29 cases in this series. In one patient, following roentgen ray treatment

* Read before the Section on Pediatrics of the Medical Society of the State of Pennsylvania, Erie Session, October 2, 1929.

of the enlarged thymus, it ceased promptly after the first treatment. In 26 patients, the improvement was more gradual, and in the 2 remaining patients the stridulous breathing continued months after all evidence of thymic enlargement had disappeared.

Cyanosis is undoubtedly due to pressure on the large vessels and auricles, rather than to tracheal stenosis, as I have often partially relieved intense cyanosis and suffocative attacks from an enlarged thymus by hyperextending the head. This procedure decreases the width of the critical space of Grawitz. If the cyanosis were due to tracheal compression it would thus be made worse. Recently, I was able to determine the reason for this relief on the autopsy table, where I found that hyperextending the head raises the thymus from the base of the heart, while flexing the head presses the thymus upon it.

In this series, 23 patients had some degree of cyanosis. It varied from a slight blueness about the face during a crying spell, to the intense cyanosis that accompanied spontaneous suffocative attacks, or breath-holding spasms. In one patient, thymic interference with the circulation manifested itself by feebleness and a persistent grayish pallor, a condition suggestive of a congenital cardiac defect. In 4 patients, prompt relief of the cyanosis followed roentgen ray treatment of the enlarged thymus. In 15 patients, definite improvement was made, and in 5, who also had breath-holding spasms, there was no relief following the treatment.

Dyspnea invariably accompanies stridor and cyanosis. It may be slight, manifesting itself on inspiration only by episternal and intercostal retraction, or it may be severe, as in the suffocative attacks. These seem to take place spontaneously. In them the infant becomes intensely cyanotic from inability to bring air into the lungs. Unconsciousness may follow, and death, if it does not occur at once, seems imminent. In this series, 3 infants had spontaneous breath-holding attacks. Prompt and seemingly miraculous improvement followed roentgen ray treatment of the enlarged thymus.

Cough is not an infrequent symptom. It may be due to the irritation of tracheal compression and occasionally, because of its peculiar brassy quality, to the involvement of the recurrent laryngeal nerve. It may also be associated with choking, a result of the difficulty that the dyspneic infant experiences sucking on the breast or bottle. The loose rattling cough associated with moderate dyspnea, stertor, and wheezing is not often recognized as being due to an enlarged thymus. These symptoms, which simulate a sibilant bronchitis from infection, are no doubt caused by pulmonary congestion from thymic pressure on the great vessels and the base of the heart.

In this series, cough occurred in 15 patients, 7 of whom had symptoms suggestive of a pulmonary infection. Choking also occurred in 7 cases. Roentgen ray treatment of the enlarged thymus rarely caused a prompt cessation of the cough. Following treatment, the cough would become softer and gradually cease in those patients with symptoms suggestive of a respiratory infection. In a number, it would persist for months, often with a peculiar harsh and brassy quality suggestive of continued irritation of the recurrent laryngeal nerve.

The following illustrates a spontaneous suffocative attack caused no doubt by tracheal stenosis, as well as by pressure upon the large vessels:

S. F., was a normal birth at term. Respiration, however, was established with difficulty. Within a few hours after birth, severe suffocative attacks, that is dyspnea, with extreme cyanosis occurred. The attacks lasted for a few minutes and recurred at frequent irregular intervals. As many as 6 were observed within an hour. Full dorsal flexion of the head, seemed slightly to relieve the dyspnea and cyanosis. The baby appeared extremely ill and death seemed imminent. The diagnosis of an enlarged thymus was confirmed by the roentgen ray and a roentgen ray treatment was given. Except for a severe suffocative attack that occurred immediately following the first treatment, improvement began at once and continued.

A second case illustrates milder symptoms produced by the pressure effects of an enlarged thymus upon the trachea and large vessels, as the more remote effects of circulatory interference.

From birth which was normal, L. G., had dyspnea. Stridor accompanied the respirations. Suffocative attacks did not occur. A few hours after birth, clonic convulsive movements of the left arm and leg and occasional mild convulsive movements of the entire body took place. Because of the convulsions, a diagnosis both of intracranial hemorrhage of the newborn and of an enlarged thymus were considered. Roentgen ray examination showed the latter. The dyspnea, cyanosis, and stridor promptly improved after a roentgen ray treatment. Convulsions also ceased within 24 hours.

The localized and general convulsions can be explained as the result of the passive intracranial congestion, with possible hemorrhages, incident to the pressure of the enlarged thymus on the veins within the upper mediastinum. A differential diagnosis between intracranial hemorrhage of the newborn and enlarged thymus is extremely difficult. In both conditions there may be attacks of dyspnea with cyanosis. Convulsions likewise may occur in both, as in the case just cited. A roentgen ray examination will help to establish the diagnosis.

The following case is also illustrative of the results of thymic pressure on the large vessels and base of the heart:

T. D., delivered at term, by a cesarean section, before labor was far advanced, because of a pelvic deformity of the mother. Respiration was established with great difficulty, owing, it was thought at the time, to the ether narcosis. Although well developed, the infant appeared extremely weak. The respirations were slow, shallow, and somewhat irregular. No stridor or other evidence of obstruction to respiration were present. There was a persistent grayish pallor which at times deepened to cyanosis. It was necessary to administer oxygen frequently. Nourishment was taken by means of a dropper. Feeble crying occurred only when incited by flagellation.

On the fourth day after birth a roentgen ray examination determined the presence of a moderately enlarged thymus. A striking and continued improvement followed roentgen ray treatment.

The close resemblance between the loose rattling cough associated with slight dyspnea and wheezing due to an enlarged thymus, and the ordinary sibilant bronchitis of infancy, is illustrated by the following case:

M. B., born at term in a normal manner, had at the age of two weeks what the mother thought was a cold. He breathed heavily with a rattling noise in the chest, and had a frequent loose cough that continued night and day. The nose was constantly obstructed. He took nourishment with great difficulty. Occasional mild breath-holding attacks also occurred. I first saw the child at five weeks of age. On examination, he appeared comfortable, although he breathed rapidly and irregularly. The respirations were stertorous from what appeared to be the presence of nasal and pharyngeal mucus. Retraction of the soft parts occurred with each inspiration. The breath sounds were obscured by the transmission of the noisy nasal breathing and the presence of coarse mucus râles in the trachea. The temperature was normal. Physical and roentgen ray examination determined an enlargement of the thymus gland to the left. On the fourth day following the roentgen ray treatment, the infant was much improved. Complete recovery followed subsequent treatments.

The following case illustrates symptoms suggestive of an infection of the respiratory tract, and syncope, both attributed to thymic enlargement.

J. M., normal birth at term had from birth, stridulous respirations, most marked while nursing. Frequent coughs of a croupy nature occurred. At the age of one month, and without apparent cause, he suddenly turned white, lay limp, and seemed to be unconscious. He did not respond to ordinary stimulation, but finally brightened up at the end of two hours. The cough and stridulous breathing became gradually worse, until, according to the mother, the baby breathed like an asthmatic. When first seen at the age of 4 months, he appeared to be an exceptionally well developed baby of 12 pounds. The nose was obstructed, and the breathing was rapid, irregular, and accompanied by stridor. Slight retraction of the soft parts occurred with each inspiration. Roentgen ray examination determined a moderately enlarged thymus. For two days following the initial treatment, all the symptoms were exaggerated. They then subsided and, after subsequent treatments, disappeared altogether.

Noisy nasal breathing or nasal obstruction occurred 6 times in Morgan, et al., series of cases. He reported uniformly good results with roentgen ray treatment of the thymus. This symptom is of interest because no adequate explanation can yet be given as to how it is produced. In this series, 13 patients had noisy nasal breathing. It always accompanied other symptoms of thymic enlargement. Roentgen ray therapy of the thymus caused prompt improvement in 11 cases. Two patients continued to have the symptom in spite of treatment.

The following is the report of a case in which noisy nasal breathing was the outstanding symptom of the enlarged thymus.

R. C., normal birth at term. At about the age of two months, the mother noticed that the baby's so-called cold in the head, or obstructed nose, was getting so severe that the child was unable to nurse and breathe at the same time. Choking attacks, would, therefore, ensue, accompanied at times by mild cyanosis. According to the mother, the baby always slept with his head in extreme dorsal flexion and turned toward the left, apparently to get more air. Local treatment of the nose by various nose and throat specialists was without avail. A sojourn at the seashore was likewise without benefit. Finally, at the age of five months, a roentgen ray examination was made, and an enlarged thymus discovered. A prompt improvement followed roentgen ray treatment.

Esophageal stenosis produced by the pressure of the enlarged thymus occurred but once in this series.

The following report is illustrative of the prompt cure that resulted from roentgen ray therapy.

E. K., instrumental delivery at term, was a particularly well-developed boy of 9 pounds. From the first, there occurred a regurgitation of all fluids taken. He would eagerly take water from a bottle, swallow a few times, gag, and then regurgitate it. Dyspnea, cyanosis, and stridor were not present. When I first saw the child, a diagnosis of esophageal obstruction was made. An enlarged thymus, some congenital abnormality of the esophagus, and cardiospasm were considered as possible causes of the obstruction. Roentgen ray examination, however, determined an anteroposterior enlargement of the thymus. Within 6 hours, after a heavy dose of roentgen rays, the baby was able to swallow and retain water from a bottle, as well as the milk that had appeared in the mother's breasts.

It is difficult to explain how the thymus can cause esophageal obstruction through pressure without at the same time causing tracheal stenosis. The most likely explanation is that the trachea, by virtue of stout rings, transmits the pressure of the thymus upon the esophagus.

The immediate relief of the symptoms following roentgen ray therapy permits no doubt as to the cause of the esophageal obstruction.

Pylorospasm, which is a manifestation of hyperactivity of the vagi, has been noted by Barbour, Rueben, and others, to be associated with thymic enlargement. These authors report prompt relief of pylorospasm with roentgen ray treatments of the thymus. Morgan, et al., also report the relief of sleeplessness, restlessness, and irritability (symptoms of the vagotonic infant) in 3 instances following roentgen ray treatment of the gland. In 5 cases I, too, have noted the association of thymic enlargement with pylorospasm. Besides the pylorospasm, all of them had other symptoms of thymic enlargement as well as the symptoms of the vagotonic or hypertonic infant.

An enlarged thymus was also found in four hypertonic infants, who did not have pylorospasm but other symptoms suggestive of thymic enlargement. Of the 5 cases of pylorospasm, one case was already much improved when the enlarge thymus was discovered. In 3 cases, roentgen ray therapy of the thymus failed to relieve the pylorospasm, while the other symptoms of the enlarged thymus present were benefited. In one case, the relief of pylorospasm that seemed to follow roentgen ray therapy was probably due to the atropin that was being given. Following roentgen ray treatment, vomiting would occasionally stop for a few days, but would invariably recur. This cessation of vomiting, might have been due to the general nervous depression which usually follows roentgen ray therapy, as sleeplessness and restlessness were also temporarily relieved.

The following case illustrates pylorospasm associated with symptoms suggestive of an infection in the respiratory tract, in an infant with an enlarged thymus:

From birth, M. S., had choking attacks which occasionally caused him to vomit. When he was 3 weeks old a spasmodic, croupy cough developed that was very persistent and refractory to treatment. When first seen by me, the infant, aged 3 months, appeared malnourished, had a croupy cough, and frequently vomited in a projectile manner. Physical as well as roentgen ray examination determined an enlargement of both lobes of the thymus. Following a roentgen ray treatment, the vomiting temporarily ceased and the cough became much softer and less frequent. Ten days after the first roentgen ray treatment, severe projectile vomiting recurred. Practically everything taken into the stomach was rejected. He was extremely restless, irritable, and cried constantly, at times becoming quite blue about the mouth. Second roentgen ray treatment failed to relieve him. With the administration of atropin, the projectile vomiting soon ceased, even though thick cereal foods were not given. At the same time irritability and restlessness lessened. He gained considerably in weight and did very well for the next 4 weeks, when suddenly he developed severe cramplike pains, associated with pallor and general appearance of shock. Fecal vomiting developed and bowel movements containing bright blood and mucus were passed. No abdominal tumor was palpable. Diagnosis of acute intussusception was confirmed by operation. It was reduced and the infant made an uneventful recovery.

The following case presents pylorospasm with stridor and mild breath-holding attacks:

From birth, H. C. was restless and irritable. He had cold, clammy extremities and mottled skin. He was startled easily, had occasional mild attacks of spontaneous breath-holding and a more or less persistent stridor. At 3 weeks of age, projectile vomiting began and became quite severe. On roentgen ray examination, the left lobe of the thymus was found to be enlarged. Thorough treatment was given, after which the stridor and breath-holding attacks ceased. The projectile vomiting continued. This was readily controlled by the administration of atropin without any change in the fluid formula. The mother believed that the atropin was likewise responsible for the relief of the cold extremities, mottled skin, and general irritability.

Breath-holding spasms are considered a common symptom of an enlarged thymus. These spasms are suffocative seizures that invariably follow a preliminary state of crying occasioned by an injury or an attack of temper. The child holds his breath and becomes more or less cyanotic. Occasionally the cyanosis is so severe that he becomes unconscious. Convulsions may also occur. Other symptoms of an enlarged thymus are often present. These seizures must be clearly distinguished from those which occur without provocation, previously described as spontaneous suffocative attacks. I wish to emphasize strongly that all breath-holding spasms in infants and children are not due to thymic enlargement. The good effects of firm physical and psychical control testify to the lack of relationship between the thymus gland and the breath-holding syndrome. In all such cases, however, a roentgen ray examination should be made and treatment given if the thymus is found to be enlarged, even though a diminution in the size of the thymus fails to cause a complete cessation of the breath-holding spasms.

In this series, 20 infants with enlarged thymus had breath-holding spasms. Roentgen ray therapy completely relieved 5 of them, whereas in 11, the spasms became less frequent and not so severe. In 4 cases, breath-holding spasms were uninfluenced by the therapy.

The following is the report of a case in which thymic pressure symptoms were relieved by treatment, which did not completely stop the breath-holding spasms.

B. S., normal birth at term, shortly after birth, breath-holding attacks with mild cyanosis occurred

whenever the baby cried. Breath-holding was usually terminated by a curious crowing inspiration, during which there occurred a marked sucking-in of the suprasternal notch and intercostal spaces.

Upon examination, the baby was found to be well nourished, though easily startled and hyperirritable. The breast was taken for short periods only, because of the baby's inability to breathe and nurse at the same time. The baby would suck until slightly blue, release the breast for a few moments, and then continue to nurse. Roentgen ray examination showed an enlarged thymus. After several treatments, the baby nursed with comfort, the crowing inspiratory sound disappeared, and the breath-holding attacks lessened in number and severity. Mild attacks of breath-holding still occurred, however, 3 months after the initial treatment.

The following illustrates the complete failure of the roentgen ray treatment to stop the breath-holding spasms:

W. K., normal birth at term. Ten days after birth, the mother noticed that the baby would hold his breath while crying, become rigid and very blue. The breath-holding would continue until he was actually unconscious, at which time breathing would recur and consciousness gradually return. The baby then appeared exhausted and listless and would fall asleep. These attacks occurred as often as ten times a day. A diagnosis of temper tantrums was made by the attending physician. It was not until 10 weeks after the first attack that a roentgen ray examination was made and an enlarged thymus found. The severity and number of attacks promptly diminished following 4 treatments at weekly intervals. Within a few weeks after the first treatment, occasional severe breath-holding spasms again occurred. I first saw this child at 4 months of age for an attack of bronchopneumonia, from which he recovered. Because of the persistence of the breath-holding spasms, a second roentgen ray examination was made, and although no indication of an enlarged thymus was present, 3 mild treatments were given but without improvement. Whenever the child cried, severe breath-holding attacks accompanied by rigidity, cyanosis, and unconsciousness occurred. The mother, very incapable and nervous, indulged the child in every way to avoid them. As a consequence, he became a veritable tyrant. It is of interest to note that while away from his mother in a hospital, the child did not have a breath-holding attack after the first few days.

The following case report is that of a baby who presented the peculiar symptoms of rapid panting respirations also mentioned by Morgan, et al. How the thymus can cause this symptom is at the present time a matter of conjecture. While relief of the symptoms followed roentgen ray therapy, the subsequent course of this case makes the rôle of the thymus questionable.

Nineteen days after birth, G. F. developed rapid panting respirations, varying from 60 to 120 per minute. There was no cyanosis, playing of the alæ nasi, or cough. The temperature was normal. Physical examination determined dullness on percussion and bronchial breathing of the right upper lobe of the lung. Because of the extraordinarily rapid respiration and physical findings of a pneumonia without fever, a roentgen ray examination was made. It showed marked enlargement of the right lobe of the thymus. The signs of consolidation were therefore due to the right lobe of the thymus which transmitted the tracheal sounds.

Following roentgen ray treatment, the respirations gradually decreased in rate, and 3 days afterwards the previous physical findings were absent. Because of convulsions that developed 3 days after the initial treatment, the infant received another roentgen ray treatment. A curious toxemia followed, manifested by increasing stupor that led to death. It was reported as a case of radio toxemia.

In this series there were two patients who had syncopal attacks, besides other symptoms of an enlarged thymus. As the syncope evidently was not due to the direct but to the remote effects of thymic pressure, they are mentioned only for the reason that Morgan, et al., had 9 patients who were relieved by roentgen ray therapy of the thymus.

Summary and Conclusions

The symptoms attributed to an enlarged thymus are so varied that the credulity of physicians as to its etiologic rôle is justly taxed. At present, the only criteria we have on which to base this rôle is the effect that a diminution in the size of the thymus has on the symptoms.

The prompt relief that roentgen ray treatment of the thymus afforded the three patients with spontaneous suffocative attacks permits little doubt of the part the thymus played in the production of them. For the same reason, I believe that an enlarged thymus caused the symptoms of esophageal stenosis in the case reported.

While not so strikingly relieved by the roentgen ray treatments, stridor was nevertheless sufficiently controlled by them in 29 patients to warrant the belief that the thymus was the original cause, except of course in those patients in whom it persisted in spite of treatment. Here a congenital laryngeal stridor or laryngismus stridulous was no doubt present.

The etiologic rôle of the thymus in the production of dyspnea, cyanosis, and the symptoms of pulmonary infection, through pressure upon the great vessels and the base of the heart, is evident from the relief that treatment of the gland afforded in the cases reported.

Noisy nasal breathing or nasal obstruction was unquestionably relieved in 11 patients, through treatment of the enlarged thymus. That this is a curious therapeutic phenomena can readily be appreciated. I have no adequate explanation for it.

It must not be assumed, however, that roentgen ray therapy of the thymus can relieve nasal obstruction caused by adenoids, syphilis, foreign bodies, acute infections, etc.

Failure of roentgen ray therapy of the thymus gland to relieve pylorospasm while other symptoms of thymic enlargement were relieved makes it seem doubtful that an etiologic relationship exists between the gland and the pylorospasm. The frequent presence of an enlarged thymus in the hypertonic infant, in whom pylorospasm may or may not be a symptom, makes me inclined to believe that the enlarged thymus is but a part of the clinical picture of the hypertonic infant and not the whole cause of it.

The results of roentgen ray therapy on the enlarged thymus in the 20 infants with breath-holding spasms make it appear that there is an etiologic relationship between the two in the vast majority of cases. The failure of treatment, however, to relieve 4 cases, and the persistence of occasional spasms for months or years after all evidence of an enlarged thymus has disappeared, throw some doubt on this relationship. This is also strengthened by the good effects which proper physical and psychical control of children has on the breath-holding spasms. From my experience, I should say that an enlarged thymus unquestionably plays an etiologic rôle in some cases of breath-holding spasms; in others, some other cause seems to be operative.

Definite conclusions as to the etiologic rôle of the thymus in the case of rapid panting breathing cannot be made. From the results of treatment, it appears that the enlarged thymus may have been the cause of the symptom, especially as Morgan, et al., noted 4 such patients who obtained relief by treatment.

In conclusion, I wish to emphasize that before the many symptoms attributed to thymic enlargement can be definitely considered as due to it, other possible causes of the symptoms must first carefully be studied and, if possible, excluded. The results that followed treatment of the enlarged thymus must also properly be evaluated. Only in this way can information of value be obtained about a truly interesting disease.

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ROENTGEN DIAGNOSIS AND TREATMENT OF ENLARGEMENT OF THE THYMUS*

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The roentgenologic diagnosis of enlarged thymus is still unsettled and to many who are not alive to the extensive controversy now going on, the subject has been worn threadbare. From a roentgenologic standpoint this problem has not been sufficiently or adequately approached. Contrary to the prevailing opinion, there seems to be very little positive or exact knowledge concerning this structure from either the roentgenologic or other points of view. The laity is much stirred up about the thymus, pediatrists are much alarmed about it, and a large part of our diagnostic and therapeutic practice is devoted to the administration of a moral diagnostic and therapeutic sedative which is all to frequently based largely on hearsay or personal opinion often without proper foundation.

There are, however, certain definite and well-founded facts concerning the thymus which are not sufficiently well known generally and which, we believe, deserve due consideration. Beyond these, there is one school which is insistent that certain dangers arising from what is apparently obstructed breathing are mechanical in origin and inherent in an abnormally large thymic gland or one which becomes abnormally large under certain conditions and actually obstructs the trachea, and even causes other remote phenomena as asthma and pyloric spasm with vomiting. We have been compelled to work along this line of reasoning and to govern our procedures accordingly. We shall certainly continue to do this until convinced that we are entirely wrong. To do otherwise would be to court disaster if this one school is the correct one, and no harm is being done if it is proved that we are following the wrong course. On this basis we have made a special study of the thymus with a view of determining under what roentgenologic conditions it may be regarded as a menace. Likewise, we have attempted to formulate our thymic technic in such a way as to detect other conditions which may present phenomena similar to those of enlarged thymus.

A vigorous controversy based upon more or less theoretical grounds has raged for the past hundred years regarding the exact cause of death in cases of supposed status lymphaticus or enlarged thymus. Death in connection with the thymus has been ascribed to a great variety of causes, such as pressure, the raising of vagus tone, hypersusceptibility to physical and chemical agents, anaphylaxis and abnormal thymic secretion.

Our own views are based very strongly upon the statements of Jackson, and correspond very closely with those of many pediatrists who see wisdom in being on the safe side of the thymic controversy. We believe, therefore, that the thymic menace is largely one of tracheal compression. Jackson,[1] in 1907, made the following statement:

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It has been my privilege, with the aid of the bronchoscope, to demonstrate beyond all doubt on the living patient the purely mechanical nature of "thymic asthma" in one instance. This, of course, does not prove that every case has this same pathologic mechanism, but it does prove the occurrence of that which many . . . have denied, namely, that a hypertrophic thymus can compress the trachea sufficiently to obliterate its lumen. . . . It would seem more accurate to call it thymic tracheostenosis.

He further suggested:

Let thymic asthma be applied to cases supposed to be associated with neuropathic, convulsive, lymphatic, rachitic, hemic or other pathology, if desired, until their exact pathological mechanism shall have been demonstrated.

In 1915, based upon further observations, Jackson[2] made the following statement:

Thymic death under anesthesia attributed to "status lymphaticus" and "hyperthymization of the blood" are nothing more or less than arrested respiration due to obstructive pressure of the engorged thymus. Artificial respiration is useless, as air cannot be drawn into the lungs, although it can be forced out. After death the engorgement factor is not evident.

In a recent communication,[3] he states:

Over 300 cases since that time have been observed bronchoscopically showing compression and the purely mechanical character of wheezing, dyspnea, and the impending asphyxia from thymic pressure.

In view of these statements of an eyewitness of actual conditions in the living, we, who have the next best opportunity of observation during life, and under circumstances conducive to engorgement (The trachea of an infant is as easily compressed as the rubber on a medicine dropper; the upper orifice of the thorax is a rigid ring. Cough, choking, and hard breathing jam the large thymus into this ring and compress the trachea.), cannot do otherwise than take the stand of thymic compression, or to use the better term of Jackson, thymic tracheostenosis.

Any roentgenologic technic undertaken in the study of the thymus should include the neck or upper respiratory tract. The exact technic will vary considerably with the age of the individual. In infancy and early childhood, when foreign bodies and the thymus play an important rôle in diagnosis, our technic has been adapted to all chest examinations, and is no doubt, one which is rather generally in use, with certain slight modifications. There is always a preliminary fluoroscopic study made in essentially the same positions as the roentgenographic views. The sagittal roentgenograms are made on a rather low table in the prone posture with the infant's chest and neck on the casette. The tube is raised 38 inches above the latter and directly over the suprasternal notch. One attendant holds the lower extremities and hips and another the upper extremities above the head, which must be held exactly straight, without the slightest rotation to either side and midway between flexion and extension. The exposures are made in 1/20 sec. with 100 ma. current, but may be made faster with a higher milliamperage. One exposure must be made during expiration and one during inspiration, efforts being made to get them at the peak of each phase. The child is forced to cry because of the greater accuracy of timing the phase and the deeper respiratory effort. The patient is next placed on one or the other side. The arms are held *downward and back* so that the shoulders are thrown posteriorly as far as possible. The head should be held separately and should be so elevated that the neck will be absolutely straight with the body, and it should be in a position exactly between flexion and extension. An exact lateral view is essential. The exposure requires about twice the time of the sagittal views. One must be made during expiration and one during inspiration, and again, at the peak of each phase if possible. The neck is, of course, included. Important conditions may be overlooked unless these two lateral roentgenograms are made. In older children the erect posture becomes more desirable.

Recently we have been experimenting with a combination chair and casette holder for examining the infants in the erect posture. A large number of clinically normal babies from the maternity and pediatric outpatient departments have been examined by both the prone and the erect technics in order to reach a definite conclusion as to which may be the more desirable for general use in detecting pathologic conditions, especially as we have felt that the thymus is still a structure which has not been examined in a satisfactory manner as a rule.

As a result of these studies, we have come to the conclusion that in infants and young children, the examination should be made in both erect and prone postures. We feel now that better roentgenograms can be made in the erect posture, but as the child usually lies on the abdomen or back, exposures should be made in the horizontal position as well, in order that one may obtain as nearly as possible a true idea of the usual postural anatomical relationships. This means considerable work, but it is worth it if we are to be accurate in our deductions.

In an effort to overcome the shortcomings of the thymic examinations as it has been carried on in the past, and to establish, if possible, an arbitrary standard whereby one can be justified

in rendering an authoritative opinion upon normal findings and abnormal encroachments on the spaces in the upper chest and neck, we have undertaken the examination of the series of presumably normal infants in both the erect and horizontal positions. As it is exceedingly difficult to examine a young child in the erect posture under ordinary conditions, we had an adaptable chair made for the purpose.

This chair, a modification of the encephalogram chair previously described (*Amer. J. Roentgenol.*, May, 1928, p. 482), is, of necessity for the two purposes, a large one upon which broad wheel casters have been placed to facilitate movement when not in use. A door stop was placed on each leg so that the chair can be made absolutely stationary when desirable. The back of the chair is easily movable up and down in order to make it flexible as to height for children of various ages. This part of the chair also contains a bakelite casette holder. A restraining band of the usual commercial type is attached to the outer sides of the erect arms of the back in order to aid in holding the child erect and against the casette holder. (See figs. 1, 2, and 3.) An attendant must hold the arms and head of the child. As the babies must be held by hand in both methods of examination as well as during fluoroscopy, it is not wise to have any of the regular members of our staff do this continuously, hence the nurse bringing the patient or our pupil nurses who are with us for a short time are designated for this purpose.

In the erect postero-anterior position the arms are held up on either side of the head and great care must be taken to have the body symmetrical, so that the resulting roentgenograms will show the sternal ends of the clavicles equidistant from the spine and the trachea in the midline. In the lateral views the head must be held so that it does not fall to either side and is at a midpoint between flexion and extension. The arms must be held back of the patient as in the horizontal technic, and the head placed with the same care. As stated above, we believe that the examination of the infant in the erect posture should be an integral part of the technic for enlarged thymus but should not be carried out to the exclusion of the study in the horizontal position.

This technic has been adapted for the examination of the chests and necks of infants and young children because it seemed best fitted for the detection of two important conditions—thymic enlargement and foreign bodies—and at the same time, was perfectly satisfactory for all other purposes at this age. The neck is very easily included with the chest in this technic. The examination as ordinarily carried out by most individuals *does not give the correct data* in regard to thymic encroachment. All that it does is to show size, and relative size varies with respiratory phase and position. As before stated, we are now convinced that the examination must be made in both the erect and horizontal positions. Moreover, Jackson[1] states that the dyspnea in thymic tracheostenosis is worse in the erect posture. In the erect posture, one must be careful to see that the child does not slouch down, because if this happens, the large liver of the young child pushes up the domes of the diaphragm and causes buckling of the trachea, or increases that which is already present.

There are two reasons for examining thymic suspects in the postero-anterior direction during both phases of respiration. In the first place, there is a great difference in the width of the shadow of the gland, it being much wider in the expiratory phase. If any comparative measurements are to be made, this should be based upon the appearance at both phases. As a matter of fact, however, we pay but little or no attention to this view in diagnosis as far as the thymus is concerned, and usually only when the shadow is thick or dense, and suggestive of lobation. Many years ago, Baetjer, one of the first to do so, objected to this view for diagnostic purposes. The thymus usually obstructs not because it is wide, but because it is thick. This seems to be one of the most difficult ideas to impress upon the minds of so many roentgenologists. Jackson has stated that lateral compression of the trachea occurs in only about 25 per cent of the cases. This would be difficult to detect, and, as previously stated, we judge this possibility only by the shadow of a thick lobulated gland.

Secondly, the thymus may not be responsible for the obstructive phenomena, and the two phases are essential for the detection of other causes of obstruction which may be suggested by this complete examination. In infancy, the thymus is naturally a preponderant structure, and with the exception of patients who have a strong history of foreign body, retropharyngeal abscess, diphtheria, whooping cough, or a few other conditions, it is almost always suspected as the cause of obstructed breathing, or what is taken for obstruction, until it can be excluded.

The lateral view is essential in thymic examination because thickness of the gland in relation with the trachea is usually the key to the situation. The essential roentgenologic features of pathologic enlargement of the thymus are *kinking or compression of the upper intrathoracic trachea.* Both phases of respiration are necessary to prove either of these appearances because we must compare the tracheal caliber at

the two periods. During the expiratory phase and just as inspiration begins, there is a normal collapse of the trachea from behind, owing to the absence of the cartilaginous ring structure on this aspect. Jackson states that the tracheal collapse in infants is as easy as that of the bulb of a medicine dropper, and that the normal change in lumen at the beginning of inspiration is about 50 per cent and involves the posterior or purely membranous portion. By bronchoscopic observation the lumen is seen to become crescentic instead of rounded, with the hollow of the crescent posterior. Because of the presence of air in the horns of the crescentic lumen, the apparent collapse, as seen on the roentgenogram, is not as great as the actual amount. It will be noted, however, that the posterior part of the intrathoracic trachea is blurred and not clean cut as compared to the anterior aspect during the period of collapse.

Our signs of tracheal encroachment or potential stenosis from enlarged thymus in the lateral view have the following appearances: (1) Narrowing of the air space at the thoracic inlet on inspiration. (2) Too great a collapse on expiration. (3) Buckling of the trachea at either phase as it passes over the top of a large gland. This appearance must be based upon a rigidly enforced technic, especially in regard to the position of the head. Any one or all of these signs are sufficient for diagnosis. Examinations as they usually seem to be made do not show these exact evidences of pathologic enlargement. The lateral views during the two phases of respiration are also essential in the differential diagnosis of enlarged thymus and some of the other causes of high respiratory obstruction.

High respiratory obstruction may be due to numerous conditions in addition to enlarged thymus, and one should not be misled when examining an infant or young child because of the relative preponderance of this kind. Be sure that the examination includes every one of the possibilities that can be discovered before concluding that the clinical phenomena are of thymic origin. Some of the other conditions, it is true cannot be found roentgenologically, and if the thymic size and tracheal relations do not explain the symptoms, or if they persist after what seems to be adequate treatment, further search by clinical or bronchoscopic means should be devised.

One should always have in mind the following conditions when examining an infant or young child with apparently obstructed breathing: Opaque and especially nonopaque foreign bodies, retropharyngeal abscess, tracheal or laryngeal stenosis, recurrent laryngeal paralysis, relaxed upper respiratory soft tissues (especially in rachitic children), asthma, whooping cough, meningitis, congenital heart conditions, retropharyngeal and retrotracheal abscesses, the tracheal and laryngeal stenoses including those due to diphtheria and streptococcic infection, and edematous tracheobronchitis from influenza, stearate of zinc, and other irritants and the congenital narrowing.

Asthmatic cases are likely to be most confusing to the roentgenologist because, during attacks, the phenomena at the two phases of respiration may be quite similar to, or the same as, those of high obstruction. Asthma may be blamed on the thymus whether there is any connection or not. Whooping cough produces a mild tracheobronchitis and spasm of the glottis, which may be misleading at times.

It may seem strange that meningitis should be confused with thymic enlargement, but we have examined one case in which such confusion occurred. A child, 17 days old, was admitted to the University of Pennsylvania Hospital as an emergency case because of sudden onset of marked cyanosis, catchy respiration, and occasional twitching of the extremities followed by generalized convulsions. Enlarged thymus was suspected. Roentgenologic examination showed no thymic enlargement and the lungs were negative. Fluoroscopically, there was fixation of the domes of the diaphragm at irregular intervals, but they usually moved symmetrically and did not seem to be flattened. The mediastinal structures did not deviate with either respiratory phase. The child died shortly after examination and admission. Postmortem cisternal puncture showed acute streptococcic meningitis. If this child had been treated on the basis of the clinical diagnosis we, or our treatment, would have been blamed for the death.

Recurrent laryngeal paralysis is not an infrequent complication of enlarged thymus and is a most elusive condition because it cannot be detected by roentgenologic examination. The roentgenologist should have it in mind, however. We have encountered three cases. If the clinical signs suggest high obstruction and the roentgenologic evidence is more or less corroborative, on the one hand, and persist following what has apparently been an adequate amount of treatment, on the other, an endoscopic examination should be advised. At the examination before treatment, the thymus will, of course, be found enlarged, but this will not explain all of the roentgenologic phenomena.

Recurrent paralysis is, of course, due to the thymic pressure. Ordinarily it persists after the gland has been reduced by treatment to a size

which appears to be safe against pressure. The persistence of symptoms is then not due to thymic pressure and further treatment may not avail. According to Jackson, recurrent paralysis is more serious in children than in adults because of the loose structures of the laryngeal and

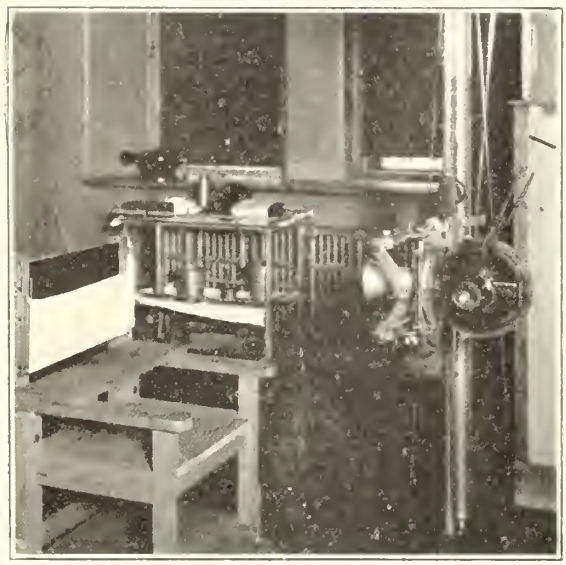

FIG. 1. Chair used for examining infants and small children in the erect posture.

pharyngeal tissues in the former which aid in the obstruction. If it persists for three or four months it is likely to be permanent. Bilateral recurrent paralysis is rapidly fatal unless immediate tracheotomy is performed. Dr. Jackson has had to perform tracheotomy three times for bilateral paralysis but never for unilateral involvement. This condition may explain some of the thymic deaths.

Attention should be called to the part that the loose tissues of the upper respiratory tract of the infant and young child play in causing obstructive respiration. This characteristic is found in connection with the pharyngeal tissues, the vocal and ventricular folds, and the aryepiglottic folds. While it does not in itself cause any definite obstacle to breathing, still, under the stress of obstruction anywhere in the upper respiratory tract, it tends to collapse and undoubtedly does become an intensifying factor. Jackson states that the collapse of loose tissues may aid in the obstruction in any case in which the child has to pull hard on inspiration. Otherwise the loose tissues do no harm except sometimes to cause a noise which may be mistaken for obstructive breathing. We have recognized this sound in suspected enlarged thymus cases in which we failed to find the signs of obstructive enlargement. According to Jackson, marked collapse is seen most often in association with rickets. We would expect, therefore, that rachitic cases would show the most obstructive signs with the least thymic compression, and they would have, therefore, the added danger of the collapse of the soft tissues.

ROENTGEN THERAPY

The thymus gland develops as paired structures from the entoderm of the third and fourth gill arches. The epithelial character of the thymus is evident until the end of the third month. The subsequent development of the thymus into a complex lymphoid like tissue is a debated question but "the most popular theory is that the reticulum and the Hassall corpuscles are the only elements that develop from the original epithelial anlage, which the small thymic cells or lymphocytes and the eosinophiles arise from the mesenchymal cells that have migrated into the epithelial structures from the surrounding tissues and that further development of the thymus is that of true lymphoid tissue."[4]

It has been the observation of all experimental workers and roentgenologists familiar with the effect of roentgen therapy on the thymic tissue, that the latter is susceptible to small doses of roentgen or radium irradiation. Not infrequently symptoms of an enlarged thymus will disap-

FIG. 2. Position of the child in the usual anteroposterior view.

pear after an ordinary roentgen examination of the chest. Another important observation which has been made by a number of experimental workers and clinicians is the fact that the thymus can regenerate in from five to ten days. This fact is important to keep in mind in planning roentgen therapy of a patient with enlarged thymus. The function of the thymus is unknown,

but some observers believe that the gland exerts an important influence on growth and calcification of bone; all observers seem to agree that

Fig. 3. Position of the child in the lateral view.

the thymus is an important source of lymphocytes and eosinophiles in the blood.

We believe, therefore, that any efforts directed toward reduction in size of an enlarged thy-

Fig. 4. (A) Large sandbags either side of head to hold it stationary; (B) straps into the ends of which are placed sandbags to keep child from raising head and hold the lateral sandbags at (A); (C) lead portal 4 x 4 inches; (D) lead rubber; (E) sheet used to wrap child; (F) folded towel placed under child's shoulders so as to allow the head to fall backward and get the chin out of the way.

mus by irradiation should be along conservative lines. Our technic consists in giving the patient from 1/4 to 1/3 of an erythema dose of x-ray irradiation over the thymic region, all other parts being protected by lead and lead rubber. It is important to protect the thyroid from primary irradiation but it is impossible to protect it from secondary rays. The treatment is not repeated

Fig. 5. Child in position ready for treatment; (A) retention straps; (B) lead rubber placed over body; (C) lead portal; (D) lateral sandbags on either side of baby's head.

unless the symptoms either do not disappear or return. Subsequent treatments may be given after an interval of ten days. Very rarely is it necessary to give more than four treatments. Subsequent roentgen examinations of the chest are of value in helping to determine the advisability of further therapy.

Following roentgen therapy for an enlarged thymus, the child may become somewhat toxic, fail to nurse or have emesis after nursing. This is presumably due to the toxic products eliminated by the breaking down of the thymic tissue. The symptoms disappear in six to twelve hours. The factors in the roentgen therapy employed by us are:

Voltage	130 kv.	Time	3 to 4 min.
Current	5 ma.	Filter	5 mm. aluminium
Distance	10 inches	Portal	4 x 4 inches.

The child is held by a restraining sheet which is wrapped tightly around it. Sandbags are placed on either side of the head to prevent movement. The child is held firmly in this position by wide straps into the ends of which have been placed heavy sandbags. A lead portal is placed over the area to be treated and lead rubber over the body. (See fig. 4 and 5.)

Roentgen therapy can be regarded as almost a specific for enlarged thymus. When symptoms of high obstruction do not disappear after several treatments it is incumbent upon the clinician and the roentgenologist to search for some other

cause and, if they fail, the aid of a skilled bronchoscopist should be obtained.

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CONDITIONS SIMILATING THYMUS DISEASE AND THEIR DIAGNOSIS

JOHN M. HIGGINS, M.D.
SAYRE, PA.

During the past few decades the greatest of interest has developed concerning the thymus gland. This interest has pertained both to the physiology and to the pathology.

As is so often true in opening up relatively new fields of possibility, a great variety of abnormal conditions has been thought to have origin in the thymus. A review of the literature discloses the greatest latitude of opinion. Some experienced observers feel that the thymus is rarely, if ever, a cause of trouble. Others, equally competent to speak, hold the gland responsible for many grave departures from health.

The purpose of this paper is not to cast question on the diagnosis of thymus disease but to point out some of the conditions which should be differentiated. It seems advisable to consider the differential diagnosis under two headings, first as it applies to the newborn and during the first few days of life; second, as it applies to older infants and to children in general. This classification is not absolute as there may easily be overlapping. It will, however, aid in the presentation.

In the first class should be placed the following: A. (1) Excessive mucus in respiratory passages. (2) Intracranial hemorrhage. (3) Atelectasis. (4) Enlarged thyroid. (5) Congenital heart defect. (6) Congenital stridor. (7) Congenital defects of respiratory passages. (8) Sepsis.

In the second class the following may be placed: B. (1) Spasmophilia. (2) Laryngismus stridulus. (3) Foreign body. (4) Laryngeal diphtheria. (5) Spasmodic croup. (6) Acute laryngitis. (7) Mediastinal tumor. (8) Enlarged bronchial lymph nodes. (9) Retropharyngeal abscess. (10) Whooping cough. (11) Bronchopneumonia. (12) Nasal polyps. (13) Petit mal.

In many of the possibilities mentioned, merely to remember them is to differentiate. I will, however, briefly consider each in some detail. It is well to consider that the respiratory distress from thymus is both inspiratory and expiratory; also that the thymus alone, probably is rarely a cause of dyspnea or apnea at the time of birth.

A. (1) Excessive mucus responds promptly to aspiration and atropin.

(2) Intracranial hemorrhage often, but not always, results from difficult or prolonged labor. The use of carbon dioxid and stimulation usually succeed, temporarily, in establishing breathing. Spinal puncture is useful as a diagnostic and therapeutic aid.

(3) In atelectasis the cyanosis improves with crying. Examination of chest may show areas of nonfunctioning lung.

(4) Enlarged thyroid usually is visible and palpable.

(5) Congenital heart disease may disclose a murmur. A "knocking impulse" on the chest wall is a constant finding.

(6) Congenital stridor improves with exertion. It is more marked when the child is sleeping and is rarely serious.

(7) Congenital defects of respiratory tract, if not obvious on simple inspection, probably could not be determined without laryngoscopic or bronchoscopic examination.

(8) Sepsis is usually associated with fever. A focus of infection might be found.

The following conditions might be confusing after the neonatal period:

B. (1) The "breath-holding" of spasmophilia may simulate thymus stridor. The presence of Chvostek's or Trousseau's signs, however, rachitic stigmata and lowered blood calcium will aid in correct diagnosis.

(2) Laryngismus stridulus comes on at a time of excitement. In a few seconds, or minutes at the most, the attack is over and the child breathes normally.

(3) Foreign body is suggested by history. X-ray and direct laryngeal or bronchial inspection would clear up doubt.

(4) In laryngeal diphtheria there are outstanding characteristics, as history, membrane (pharyngeal, nasal, or laryngeal), positive culture, and fever. The difficulty in respiration is principally expiratory.

(5) Spasmodic croup is principally inspiratory and reacts to emetics and sedatives.

(6) Acute laryngitis is secondary to a nasal or pharyngeal infection. Sedatives and external applications give quick relief.

(7) Mediastinal tumor might be difficult to eliminate. The symptoms are less sudden in appearance.

(8) Enlarged bronchial lymph nodes are secondary to some other condition as an apical area of tuberculosis.

(9) Retropharyngeal abscess can be palpated and often inspected. As a rule fever is manifest.

(10) A history of exposure, increase in white cell count, and characteristic whoop would clear up the question of whooping cough.

(11) Bronchopneumonia has definite physical findings, and dyspnea is not as sudden in onset as in thymus disease.

(12) Nasal polyps may cause dyspnea but inspection makes the diagnosis.

(13) Petit mal may be confusing. In this condition, however, the respirations are not seriously impeded.

In considering the above named conditions, little mention is purposely made of x-ray examination. This phase is fully covered by another paper in the symposium. Let me state, however, that when there is the slightest doubt, recourse should be had to x-ray. While some authorities question whether it is possible to make an x-ray diagnosis of enlarged thymus, the majority recognize in it a valuable aid.

Lastly, let me make a plea for a therapeutic test in selected doubtful cases. The good results of radiation therapy in proved thymus disturbance, and the lack of definite proof of harm in properly controlled doses, make it appear negligent not to give a suspected case the benefit of the doubt.

Robert Packer Hospital.

ABSTRACT OF DISCUSSION

Of Symposium on the Thymus

J. H. McKEE, M.D. (Philadelphia, Pa.): Our ideas are, and have been, subject to change on this important subject. I was surprised that there was no reference to the work of Hammer and some of the recent confirmations of Dr. Boyd.

We have been told that we find the larger thymus in the well-nourished child. One of the worst cases I have seen was in a premature infant, who weighed but 2 pounds and 4 ounces when I first saw it. At the time the infant had the trouble it weighed a little over nine pounds. Roentgen therapy gave prompt relief.

It seems to be the consensus of opinion at the present time that the thymus as a producer of lymphocytes is a very important part of the lymphatic system.

Clinically I find it of value to think first of status lymphaticus as a rare disease, but one that unquestionably does occur. As was brought out in the paper, all the various organs were invaded by these peculiar cells.

With regard to roentgenologic diagnosis, we must more and more depend upon the technicians, and lean heavily upon the roentgenologist, but not to depend absolutely upon him. As Dr. George E. Pfahler has said, all that you have is a shadow, and that shadow may fail you.

FRANCIS B. JACOBS, M.D. (West Chester, Pa.): In regard to rapid breathing, I had a patient recently whose rate of respiration was between 90 and 100.

RALPH M. TYSON, M.D. (Philadelphia, Pa.): I should like to ask if any of the clinicians have been able to outline the size of the thymus by percussion. Personally, I have never been able to convince myself that it can be done satisfactorily.

HENRY T. PRICE, M.D. (Pittsburgh, Pa.): The size of the thymus gland and its prominency in the suprasternal notch, could be stressed a little more than is done clinically, also that the gland is more easily palpated than percussed if enlarged.

As Dr. McKee has said, the x-ray is only one way of making a diagnosis, and if we trust too much on the roentgenologist's opinion, we are often misled.

Since this subject has been stressed so much, it is becoming popular in the lay mind, and every mother wishes her child "rayed" for the presence of thymus. She has talked about it with her friends, and has told of the number of treatments given, etc. We have to be a little careful in our discussion and the method of treatment. Some of these patients have been treated once and others quite a number of times. I know of one patient who received about 30 exposures from the roentgenologist. We should stabilize ourselves regarding the dosage.

J. GIBSON LOGUE, M.D. (Williamsport, Pa.): May I ask Dr. Pendergrass what they are doing at the University in regard to x-raying the chest for enlarged thymus before general anesthesia in children and if it has become a routine.

DR. DANNENBERG (Philadelphia, Pa.): I am very glad that Dr. McKee mentioned the work of Hammer, and as there has been no greater work written on the thymus than his. He stresses the fact that there may be an accidental involution of the thymus caused by disease or any cachetic state, as well as a rapid increase in the growth of the gland with a return to a better nutritional state.

Dr. Boyd's work is also excellent. She questions the rôle of the thymus in sudden death, and has reported several cases in which, while the cause of death seemed due to a status thymicolymphaticus, it was actually due to electric shock in one case, and, if I remember correctly, to strychnin poisoning in another.

I do not depend entirely upon percussion in the diagnosis of an enlarged thymus because a thymus enlarged in an anteroposterior diameter may give normal percussion findings.

Recurrent symptoms of an enlarged thymus after roentgen ray therapy may occur, and are due to the rapid regeneration of the gland.

DR. PENDERGRASS (Philadelphia, Pa.): In regard to Dr. Logue's question, whether we are called upon to make a roentgenologic diagnosis of enlarged or persistent thymus before giving an anesthetic, we receive calls from two groups—pediatrists who are considering having children operated upon for tonsillectomy and from Dr. Charles H. Frazier before he operates on the thyroid. Having made two mistakes in the past year, I will not now give an opinion one way or another whether it is safe to operate upon patients with visible thymic shadows.

In one, it happened that the child's mother had had a child, three months of age, die in the crib. Death was

attributed to an enlarged thymus, and she was fully aware of the possible danger of death from enlargement of the thymus from an anesthetic.

The child was operated upon and died eight hours after the operation, this death being attributed to an enlargement of the thymus. I came in for a great deal of criticism both from the doctor and the family.

Just a few months ago I had an adult patient from Dr. Frazier, in whom the same thing happened. She was a young woman 18 years of age, and the autopsy showed a tremendous enlargement of the thymus. The roentgen examination of the chest was negative.

It is not within the realm of roentgenology to say whether or not it is safe to operate upon a child, so far as the enlargement of the thymus is concerned. We can detect encroachment on the lumen of the trachea when there is sufficient enlargement of the thymus to cause this. An enlarged thymus is one of the most important contra-indications to operation.

One other point is the advisability of administering a therapeutic application of roentgen rays for diagnosis. I should like to issue a warning here. During the past summer, a friend said he had a child that he wished to have treated for enlarged thymus. A roentgen examination of the chest did not show an enlargement of the thymus. The child was in such a serious condition that I suggested to the father that the child be admitted to the hospital. The child died one half hour later, and a postmortem cisternal puncture was done. A microscopic examination of the cloudy spinal fluid showed numerous streptococci. The child had died of an acute streptococci meningitis. If the child had been treated, death probably would have been attributed to roentgen therapy.

Jackson states that the trachea of an infant is as easily compressed as the rubber bulb of a medicine dropper and the upper orifice of the thorax is a rigid ring. Coughing, choking, and hard breathing jam the large thymus into this ring and compress the trachea.

After four treatments of the thymus without disappearance of symptoms, one should look further for some other cause of the obstructive phenomena.

DR. HIGGINS (in closing): In my plea for a therapeutic test, I certainly would not advocate it until every possible measure had been taken to exclude other conditions.

School Boards Control Medical Inspection.—About 75 per cent of the medical inspection of school children in this country falls under the jurisdiction of educational authorities, and the remainder under the health agencies. This is precisely opposite to the situation in England. Control of communicable diseases has been followed by a shift in medical inspection of school children from health agencies to boards and departments of education. Numbers of schools conduct inspections of all children who enter for the first time, and their defects are listed, and medical attention is suggested. In Nebraska, the bureau of health has just completed tabulation of figures showing the results of physical examinations of the pupils in the public schools for the year 1929-1930. In 5175 of the districts the children were examined by the teacher. While the reports shown are not reliable in view of the fact that a very large percentage of the children were examined by a layman, yet they disclose a condition that is alarming. The Sturm Law made these physical examinations mandatory, but did not require the defects to be corrected. The law directs the teacher in every district to report to the parents in writing.

Fighting the Accident Menace at Home

The Home Safety Campaign which has been sponsored by the State Federation of Pennsylvania Women is deserving of a response far beyond the membership of that organization. Hospital records and vital statistics show that a great proportion of accidents occur in and around homes. Last year's record of such accidents accounted for 25,000 deaths and hundreds of thousands of serious injuries. Mrs. D. Edwin Miller, chairman of the campaign, rightly emphasizes the suggestion that ninety-five per cent of the happenings were rooted in carelessness of one kind or another.

Loose or broken steps or flooring, rickety stepladders or chairs, unlighted stairways without a hand rail, defective gas or electric fixtures, furnaces in which improper combustion sends coal gas through the house, matches or poisonous substances left within the reach of children—hundreds of small, neglected things appear as the cause of death and injury upon the accident records. The Pennsylvania Women's Federation is on the right track in carrying the campaign directly to the housekeepers of the State. It may take considerable prodding to rouse the man of the house to the energy and industry required for the making of minor repairs; but full realization of the menace involved in neglecting many of them should be a powerful incentive to correction.—*Philadelphia Inquirer.*

Tobacco Smoking

A great deal has been appearing during the past year and more, in advertisements of all kinds in regard to tobacco vs. sweets. Of course fabulous claims are being made by both sides, and millions of dollars are being spent to place the respective claims before the public. In the *J. A. M. A.* appears an article entitled "Tobacco Smoking," by Dr. Wingate M. Johnson, based upon a clinical study, to ascertain what effect, if any, smoking tobacco has on the human body, especially on blood pressure. Dr. Johnson states "as I have never smoked myself, and yet live in a city built primarily on the tobacco industry (Winston-Salem, N. C.), I have at least some claims to impartiality."

The following are worthy of note. The effect of tobacco smoking on the blood pressure is negligible, except possibly in the group of men past 60. The observations contradict the popular idea that smoking will keep one's weight down, and taboos the advertisement "reach for a cigaret instead of a sweet." Tobacco is not the causative factor in angina pectoris claimed for it. There is no effect on women during pregnancy and lactation. As to its laxative effect 70 per cent questioned said "no," 20 per cent, "yes," while 8 per cent found it constipating. No logical deductions can be given by those internists who forbid tobacco in the treatment of peptic ulcer. As to the nervous system, the average highly nervous individual smokes because he is nervous, rather than he is nervous because he smokes to excess. Most inveterate smokers show a marked congestion of the pharynx, and may either clear their throat or cough habitually, regardless of the brand of tobacco smoked. Tobacco plays no part in pulmonary disability.

The article concludes as follows: Tobacco smoking apparently has no effect on the blood pressure; there is no foundation for the popular belief that smoking decreases the weight of an individual; it is doubtful whether tobacco plays a major part in the etiology of angina pectoris; the act of smoking, if it affects blood pressure at all, reduces it temporarily; and the effect of tobacco smoking is chiefly local, exerted principally on the pharynx.

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Editorials

LAST CALL FOR THE ANNUAL MEETING

This is the last call for the 1930 meeting of the Medical Society of the State of Pennsylvania, which will be held in Johnstown, October 6th to 9th. Attendance upon the annual session of your State Society should be your outstanding obligation each year.

The scientific program, which appeared in the August number of the Journal, is most attractive and should be carefully read by each one anticipating to be in attendance, in order to select those papers and discussions that will best meet the needs of the respective member. Claude Bernard states: "In science, the thing is to modify and change one's ideas as experience advances." This principle is well exemplified in our scientific sessions.

The annual meeting from the standpoint of the scientific sessions, crowds into four days, the most comprehensive postgraduate instruction that can be assembled, and in itself should demand your attendance. The annual session further provides for the members of the State Society the opportunity to keep in touch with the material advancement of the profession through the scientific and technical exhibits. Attendance, too, not only affords an opportunity to make professional and personal friends throughout the State, but above all, it leads to a fellowship and coöperation which are essential to the welfare and improvement of any medical group.

Owing to the increasing interest in the business affairs of our Society, the reports of the officers, committees, etc., are published in the September number of the Journal. This engenders a very desirable interest and stimulates an increased activity on the part of the membership. It is obligatory for the members of the House of Delegates to read these reports, that they may be informed upon a great deal that will demand their official attention. Much thought thus can be given these various matters previous to the meeting of the House of Delegates, and in addition the delegates are afforded an opportunity in ample time to enlighten themselves upon such subjects of which they may have little or no knowledge. The plan of publishing the reports previous to the meeting should not only expedite the business of the House of Delegates, but increase the efficiency of its deliberations.

The Woman's Auxiliary has arranged a very alluring program, which should appeal to the women folks, and create in them the urge to attend. The sessions of this group have assumed gigantic proportions, and their endeavors are far reaching.

Upon arrival at Johnstown, each member should pick-up his hotel reservation. Registration at headquarters of the State Society is most essential. Register immediately. The registration booth, which will be open daily throughout the convention from 9 a. m. to 6 p. m., will be located in the basement of the State Theater, immediately adjoining the Fort Stanwix Hotel, which is hotel headquarters.

Our host and hostess will be the Cambria County Medical Society and its associate Woman's Auxiliary. These two groups have been working assiduously to prepare for the visitation of our members and their ladies. Johnstown is easily reached by auto, railroad, and aviation. The scenery en route is gorgeous. LET'S GO!

SPEAK TO BE HEARD AT SOCIETY MEETINGS

We are extremely anxious to secure the coöperation of our members, to speak sufficiently loud to be heard by those assembled for the respective meetings. This difficulty has increased during the past few years. We had numerous complaints that at the Erie Session, many of those present heard little or nothing of some of the papers read, and the same complaint, to a greater degree of many taking part in discussions.

Remember that the assemblage in a room wants to hear, this is why they attend, and all

speakers should regulate the tone and pitch of their voices, that all present may have no difficulty in hearing. To travel the distance many do to attend the annual meetings to listen to certain papers, and not to be able to hear the speaker is disheartening. There is no excuse for poor articulation.

There are some men who speak in public in a low tone, who normally have a weak voice, who do not bear in mind that they are addressing an audience; and hence, never seem to realize the necessity for raising their voice.

There is the individual who invariably looks at the floor, when speaking, and to add to the difficulty of transmitting the voice, walks to and fro.

We beseech the attention of the members to this very important detail. We would urge all speakers to stand firmly on their feet, keep their head raised, and speak sufficiently loud so that the furthest away person in the audience may hear. This is imperative.

When members are unable to hear a speaker, they should have no hesitancy to arise to a point of order, and request the speaker to speak more loudly. Calling out "louder" from the audience is not always met with a response.

Section officers should be alert in this matter, and sense the situation, and request a speaker to raise his voice. It will greatly enhance the value of the meetings.

REPORTS OF COUNCILORS, COMMITTEES, AND COMMISSIONS

In this number of the JOURNAL appears the annual reports of the councilors, committees, and commissions. These should be carefully read by the personnel of the House of Delegates in particular, that they will be fully acquainted with the subject matter of each, and will have ample time to consider any recommendations they may contain before being officially discussed upon the floor of the House.

Herewith is reiterated the essentials of the reports, with comment.

Report of the chairman of the Board of Trustees.—In this report reference is made (1) to two instances involving the Code of Ethics regarding a member seeking a patent; (2) the request of a member for defense in re criminal suit for alleged abortion. Similar requests have been made during the past several years and rejected. The action of the Board in this request should be carefully read. It transpired that there was a ring in Philadelphia consisting of unscrupulous lawyers, go-betweens and a medical quack, who had been blackmailing suspected abortionists, and those known to be innocent. The district attorney's office prosecuted the members of the ring. In one case notwithstanding the fact that the defendant admitted securing money as blackmail, the jury acquitted him. Apparently this infamous ring has been smashed.

Reports of Individual Councilors.—First district. Notwithstanding the report of the councilor in regard to coöperation on the part of the editors of newspapers and radio corporations, it is most unfortunate that in this district the newspapers continue to carry more or less extensively, flagrant advertisements of patent medicines and reading notices referring to the same, and that two most notorious quacks are being permitted to broadcast their respective specialty, decrying the medical profession and promising cures.

Second district. The luncheon conference to which were invited the president of the State Society and the secretaries of the component county medical societies of the councilor district is worthy of emulation by the other councilors. It would seem that Bucks County, with its well-paved highways could hold meetings during the winter months. The councilor pertinently states, that the burning question throughout his district is "What is to be done with the illegal practitioners in our midst?" Indeed this question is State wide. The House of Delegates should discuss it, and come to some understanding, that the members will feel better satisfied that the House has officially discussed the situation, whatever the final disposition made.

Third district. The attention of the members is called to the warning again made by the councilor of this district, and frequently referred to by State Secretary Donaldson, of the necessity of x-ray examinations in fractures and dislocations, or the signature of the proper person to the x-ray release blank.

Sixth district. The councilor for this district recommends the other councilor districts to consider a combined meeting with the Pennsylvania Roentgenological Society, as the latter will be very glad to coöperate.

Committee on Public Health Legislation.—This committee is most desirious of securing solidarity of coöperation of the members of the State Society. In order that the members may be properly instructed in the activities of this committee, they must carefully read all publicity given out by the committee, and be prepared to do their full duty in the premises. Please bear in mind that the State Legislature meets in 1931, and there must be a unified profession prepared to act.

Committee on Public Relations.—The entire report should be read, as it contains much information to the members that they should know.

The Journal for several years has been advocating a closer relation between the medical, pharmaceutical, and dental professions. The reports of the *Commission to Confer with the Various Private and Governmental Health Agencies* and the *Conference Committee with the Pennsylvania Pharmaceutical Association* refer to definite accomplishments in this regard.

Committee on Medical Benevolence.—This report bears out the continual reminders of the need for increasing the fund. The members should have this in mind, and be of practical help by making donations, soliciting donations and interesting anyone they can to include in their will a bequest to the Medical Benevolence Fund. It is most essential that the members keep this fund in mind. The Woman's Auxiliaries have been most helpful, and we are grateful.

Secretary's Report.—Under Medical Defense will be found very valuable food for thought. Read it!

"BACKACHE"

In this number of the Journal is a symposium on orthopedic surgery, in regard to backache, which is timely, because this and many similar subjects greatly need ventilation. The osteopath is reaping a harvest because the regular has been culpably neglectful of the need of examination of the backs of his patients. Thousands of patients, if not millions, are today suffering from malformed, ill-shaped backs, and curved spines, and are being treated for every ailment to be thought of, while too often the practitioner has not the least idea of the true cause of the symptoms, and the back is never examined. These backs often present the astonishing picture and record of suffering extending over years or lifetimes. One shoulder blade may be higher than the other, certain muscles are knotted and hard and bulging, certain others soft or atrophic, the spines of certain vertebrates may protrude in a noteworthy prominence, others may seem to be wholly absorbed, and the vertebral column may show all sorts of curves and abnormalisms. A certain proportion of the lateral curvatures is due to a peculiar axis of astigmatism which compelled lifelong head-tilting with compensatory spinal curvature. It is when these troubles are beginning and still functional that the wise physician's interference is needed. To what extent do all medical colleges routinely teach the art and science of examination of the back?

MENTAL HEALTH VERSUS ORGANIZED MEDICINE

The great impetus given to mental health through mental hygiene agencies other than the medical profession, such as schools of psychology, sociology, theology, lay groups, etc., places medicine, to say the least, in a unique position never before occupied in public health campaigns.

In previous public health campaigns, such as sanitation, tuberculosis, and inoculation against preventable infectious diseases, organized medicine assumed the leadership that others were keen to follow. In the present mental hygiene activities one sometimes wonders if medicine is not the tail instead of being the kite.

It is very difficult to determine at the present time the true relationship of organized medicine to the mental hygiene program. While it is true that the American Medical Association through its section on nervous and mental diseases, its journal, its publication of the *Archives of Neurology and Psychiatry* and its *Hygeia* carries from time to time articles on mental diseases, it appeals to some that it is lacking in that dynamic, forceful leadership in mental health as was shown in tuberculosis, particularly in the education of the physician and in stressing his relationship to the subjects.

While the writer is not in a position to truly evalue the attitude of state medical societies to the subject of mental health, we feel justified with the knowledge at hand in saying that thus far we have been unable to find very many putting forth constructive efforts in aiding the physician through articles in their official bulletins or active sections on neurology, psychiatry, or mental hygiene functions to this end. Pennsylvania, however, is an exception and the work of the State Society and its official journal have set a splendid example.

It would appear, however, in the light of the knowledge at hand that medicine might be said to be truly actively engaged in mental health movement only through its representative psychiatrists, particularly the 1200 or more registered in the American Psychiatric Association. When one thinks of the 1200 men to understand, supervise, and administer to the mental health needs of 125,000,000 American and Canadian citizens, there is no wonder that the increase in mental illness, the cost of care and hospitalization is a challenge to civilization; yes, even to organized medicine.

Those who are interested in mental hygiene and mental health sense many possibilities if medicine is to be the rear guard of combative attacks against mental illness. Charlatans and quacks, who have feasted on neurotics and psychoneurotics in the past because medicine failed to understand these patients, are now branching out into a new cult such as lay psychoanalysts, interpreters of dreams, and what not. Lay members of society at the present time in many sections of the country possess a better understanding of psychology than the average physician.

In this brief editorial, we are not concerned with historical medicine, that medicine exemplified by our forefathers, such as Pinel, Rush, et al., who blazed the trail in mental medicine; but we are most concerned with the present-day status of those medical men to whom they passed the torch that blighted mentalities would no longer grope in darkness nor spend their lives in the foul smelling cells, with bodies warped by ball and chain. We are now concerned with physicians representing organized medicine and as individuals and are asking ourselves will these red-blooded men be content to continue to sit on the side lines as legions tread onward to a living death, or shall they unfold the banner of Æsculapius to the winds of heaven in onward progress in the prevention, recognition, diagnosis, and treatment of mental disease in order that the personality yield its fullest blossoms.

OVERCROWDING IN THE PUBLIC SCHOOLS

One would suppose that having adopted given principles and established certain institutions it would be a matter of pride and zeal to foster and maintain them in the highest possible degree of development. Of the stability there is no shadow of doubt, and it is therefore a matter of surprise that in large and important cities there should be complaint of insufficient accommodation for all those who wish to attend.

It is conservatively contended, from both hygienic and educational considerations, that the maximum number of pupils in a class should not exceed 45, and that it is most unwise to squeeze two classes in a single room.

The remedy consists in the appropriation of money sufficient to provide accommodation for all children not yet provided for, in whole or in part, assuring also suitable allowance and adequate provision for the average annual increase. The need is an urgent one and should not go unheeded. There are certain economies that are most expensive, and certain expenses that are most economical.

THE LICENSED QUACK

We have had numerous requests in regard to a physician in Philadelphia who is advertising very extensively by radio broadcasting and otherwise his specialty, the injection treatment of varicose veins.

The State Board of Medical Education and Licensure is unable to do anything in the premises, because the person in question is a licensed physician, and is doing a recognized procedure. He visualized the large financial returns that would accrue from an extensively and properly advertised program, which he has accomplished by radio broadcasting, the most expensive advertising medium.

It is unfortunate that there is not federal control of the air, to check this form of advertising which leads to fraud. The fraud in this instance is in the methods used to separate the people from their money.

We are told that this quack is doing a very extensive business; that his brother-in-law is his assistant; that patients come from 100 miles or more, attracted by his seductive radio talks; that his scheme is to get as large a lump fee at the first visit as possible. One woman from Newark, N. J., states she was told her treatment would cost $500 if paid in advance: She managed to assemble $490. This was accepted, and the woman given 10 per cent off for cash. She was told that patients who cannot be induced to pay larger sums are accepted at $10 a treatment paid in advance; that some patients have had 30 treatments, without any relief; that 2 patients have brought suit for alleged malpractice, and others have threatened to do so.

The unfortunate part about it all is, we have been told that some of the persons stated that they were attracted by the radio talks, because their own physicians had advised them that the only treatment for their varicose veins was the use of elastic stockings, others were advised that an operation could be done, and the veins removed, nothing having been said about the injection treatment.

Naturally when they heard over the radio that they could be saved an operation, they did not again consult their physician, but applied to the astute advertiser, assuming that he must be acceptable, or the State would not permit him to practice.

The medical practice act of every state should be revised so that those guilty of fraudulent practice or fraudulent representations with regard to diseases and cures (which would reach the advertisers and radio broadcasters), would have their license revoked.

The licensed quack is a most difficult problem. As a rule he is clever but unscrupulous, the most dangerous of all and the most difficult to control.

ANENT THE PHILADELPHIA CANCER HOSPITAL, LOCATED IN MONTGOMERY COUNTY, PA.

The following is submitted as a reply to the numerous inquiries made in regard to the Philadelphia Cancer Hospital, located near Ambler, Pa. We quote from *The Ambler Gazette*, April 24, 1930:

The Philadelphia Cancer Hospital of Springhouse, which was conceived 10 years ago and managed by William J. Rouse, M.D., was granted a perpetual charter in 1921 under its present name. An organization under this charter was effected recently with the following personnel.

Then follows a list of trustees, directors, and advisory counsel. Among the directors are, Drs. Howard S. Anders, W. A. Weaver, A. J. Craig, George G. Knoll, G. Widener Knadler, and William H. Greiss.

We quote further:

The institution itself has had the full approval of the Pennsylvania Welfare Department at Harrisburg and the Chamber of Commerce in the county in which it is located. Numerous letters from well-known physicians, laymen, and former patients attest the remarkable results of its method of treating the rapidly increasing and destructive scourge commonly called cancer. For years, almost wholly without publicity, and practically without public support, the hospital has been unostentatiously, but successfully treating hundreds of cases of the dreaded disease; without the use of the surgeon's knife, x-rays, radium, or the electric needle. Many of these cases, including radical cures, had been treated by the aforesaid methods, and were pronounced "incurable" by leading medical authorities. All of which is matter of record.

Then follows a heart rending endorsement by Richard V. Mattison, M.D., of Ambler, under date of January 2, 1929. (We may insert here that Dr. Mattison does not practice medicine, but for years has been engaged in a drug manufacturing enterprise.) This is all the more interesting, because in Dr. Mattison's endorsement he states:

. . . from the cases at your hospital that I have examined personally . . . For the past 50 years I have preached the well-found doctrine that the only cure for cancer is an early extirpation of the tumor, but when I see those patients whom my associates consider "hopeless cases"—too far gone to be operated upon—turned over to you to die on your hands, and not the results of your treatment, healthy granulations preceding a radical cure, with the subsequent discharge of the patient, who goes about her household duties and remains cured for years, I am lost in amazement, and cannot but class your treatment of carcinoma with radio, wireless, and other modern wonders.

This type of exaggerated gesture or applause is all the more unfortunate, because Dr. Mattison has been very generous with his philanthropy in the community where the hospital is located, and the people of the section will be guided to a large extent by his opinions.

The following is quoted from an editorial in the *Times-Herald* (Norristown), December 14, 1929, "Our Cancer Hospital."

It is gratifying to have a case reported as a radical cure, a deep seated internal case, in which the disease had progressed to its very last stage and the patient has been discharged, as hopelessly incurable, after expert and prolonged treatment at a widely known hospital. It is equally gratifying to know that neither the knife nor radium was used in this case, etc.

The editorial closes with a plea for financial support of the hospital.

Now, in regard to the medical director and founder of the hospital, William J. Rouse, M.D. He was born in 1870 and according to one reference received a degree in medicine from The College of Medicine and Surgery (Physiomedical) class of 1900. He is reported to have been licensed to practice medicine in Illinois in 1900 and in Pennsylvania in 1901. He became a member of the Greene County (Pennsylvania) Medical Society several years ago, and by virtue of this membership qualified as a fellow of the Scientific Assembly of the American Medical Association, January, 1922. In February, 1922, Rouse made application to be transferred to the Montgomery County Medical Society, which was refused. According to certain correspondence, Rouse apparently operates a so-called cancer hospital, and claims that the treatment he gives "is purely medicinal—we do not use surgery, radium, x-ray, or plasters." There is absolutely no scientific basis for his treatment of cancer, and it may be truthfully said he would not be permitted to practice his methods in any approved hospital.

The Better Business Bureau, Inc., of Philadelphia, in July, 1929, made inquiries in regard to Dr. Rouse and his hospital, at the request of certain persons who had been solicited to donate funds to it. This Bureau at that time had several interviews with Rouse, who informed the representative of the Bureau, that he is ostracized by the medical profession because of what he terms his "revolutionary step" in the treatment of cancer.

In an interview in January, 1922, Dr. Rouse stated he received the V.M.D., degree in 1895, and the M.D., degree from the Chicago College of Medicine and Surgery, in 1900. This does not agree with a previous statement herein given, that he practiced for 20 years in Williamsport.

No diploma in his name in the room where the interview was held, but there was a diploma in the name of Reese. At the time of the interview his hospital capacity was 18 beds; he said he had 14 patients. No published statistics, and no statement as to mortality. He cited isolated cases of cure. There was no equipment for microscopic diagnosis. Definitely diagnoses patients before treatment. Almost all incurables had been turned down by 19 hospitals in Philadelphia. He claimed to be so far ahead of the profession that he was lonesome. Cancer of breast of 1 year's duration fades away after 6 months' treatment. It would seem that he is using Glover's serum.

From the information received it would seem that Dr. Rouse is maintaining an unethical institution, and many are surprised that the State Welfare Department and the Chamber of Commerce in Montgomery County, have stamped their approval, which affords the institution certified backing to appeal to the public for donations.

It is pathetic too to see the names of reputable physicians associated with the enterprise. There is no excuse for their negligence in not ascertaining the reliability of Dr. Rouse, and the integrity of the institution, more especially when the institution is questionable.

JOTS AND TITTLES

Science and Research

Dr. Arnold Osman, medical assistant at Guy's Hospital, London, has been able to render children free from asthma by adding sugar to the diet, without any other treatment. Cases of bronchial asthma which have been treated in this way have been relieved for a period of 2½ years. Unfortunately this simple remedy is of no use in cases of asthma in adults. Dr. Osman also found that the sugar treatment was beneficial in instances of infantile eczema.

Dr. J. Olivet, of the Augusta Hospital, Berlin, has recently reported a hormone secreted by the middle part of the brain, which stimulates the kidneys to increased activity. This hormone though produced by the middle part of the brain is ejected when other parts of the brain are irritated. This was first thought to be a nervous action, but the same result was produced when the kidneys were entirely freed of their nerves, proving the effect to be chemical. Dr. Olivet found that the blood serum of animals that had their brain ventricles irritated produced the same effect on the kidneys, when injected into other animals, as did direct irritation of the brain ventricle. This he considered evidence that a hormone was present.

The use of surgical ants to stitch wounds is reported by the Marshall Field Botanical Expedition, which has returned from the Amazon. Peruvian Indians, continually lacerated in tribal warfare, have worked out a handy technic. A certain ant with powerful jaws is made to bite the severed edges of a cut and draw the skin together. The insect's body is then snipped off, and the jaws serve as stitches until the wound is healed. The operation, it will be noted, is inevitably fatal to the surgeon.—*World's Work.*

R. H. Gault, in the *Journal of the Franklin Institute,* claims that the sense organs located in the skin have the ability to receive and discriminate forms of speech such as vowel qualities; and that it is possible to make the feel of speech an auxiliary to vision, and, thus, to assist the deaf in the interpretation of speech.

According to the figures published by the National Safety Council, next to motoring, the most dangerous thing one can do is to stay at one's home. The death toll for 1929 included 23,000 fatalities in or about the home. Over 9000 of these accidents resulted from falls, as slipping in the bath tub, or on a rug. Burns, scalds, and explosions ranked high. Home casualties were almost equal to those in industry.

According to an article in *Science News-Letter,* a new method of treating carbon monoxid poisoning with ultraviolet rays brings quicker relief to the patient than ordinary methods of treatment. This was the result obtained by Dr. Koza of Pressburg. This gas combines with the hemoglobin of the blood, displacing the oxygen. Dr. Koza worked on the theory that a considerable part of the blood is in the small blood vessels of the skin, and massage of the skin would stimulate the circulation in these blood vessels and let the ultraviolet rays penetrate sufficiently deep to reach the blood and drive out the carbon monoxid. Two sisters were brought to the hospital suffering from carbon monoxid poisoning. He treated one sister by the new method, the other by the usual method. At the end of 40 minutes, he found the first sister had lost half the deadly gas from her blood, but the other sister had lost only one-quarter of it. The first sister regained consciousness after 9 hours; the second, after 18 hours.

Dr. Foster Kennedy, professor of neurology at the Cornell University Medical School and attending physician in charge of nervous diseases at Bellvue Hospital, New York City, in a recent issue of the *Science News-Letter,* reports that although further research is necessary to confirm the discovery, men and women scientists working in the neurological laboratory of the Westminster Hospital in London, have isolated, identified, and photographed what they believe to be the organism of multiple sclerosis. The germ is one of a group of filterable viruses. An ultramicroscope was used to reveal the organism which is cultured from the cerebrospinal fluid of persons suffering from the disease. A special technic devised by Miss Kathleen Chevassut is used. Dr. Kennedy will attempt to repeat the experiments in the new neurological laboratory at Bellvue Hospital. "If this can be done," declared Dr. Kennedy, "we shall feel reasonably sure that the organism causing multiple sclerosis has been discovered, and that we may be on the way to developing a serum with which to treat the disease."

A survey of countrywide statistics made by the Metropolitan Life Insurance Company reveals that there are fewer deaths from pernicious anemia since the treatment with liver or liver extract was started in 1926. The mortality for whites has been reduced by 50 per cent between the ages of 55 and 74 years. The statisticians state: "Whether the use of liver or liver extracts will result in a permanent lowering of the death rate or only in a postponement of death from the disease remains to be seen from the data of individual

case experience for subsequent years." Drs. George R. Minot and William P. Murphy of the Harvard Medical School claim that since the introduction of the treatment, the deaths from the disease, and even cases of it, have become comparatively rare in the hospitals.

Dr. Alexander Fleming, of the Laboratory of the Inoculation Department, St. Mary's Hospital, London, has recently discovered that one of the moulds (a Penicillium), similar to the common fungus that sometimes spoils oranges and other fruits, will kill cultures of some bacteria, notably pus-forming cocci and diphtheria bacilli. Even when cultures of this mould are filtered, the resultant liquid, which is called penicillin, is effective. Penicillin is not toxic to animals even when given in large doses, and is nonirritant. It may turn out to be a useful antiseptic for treating infections caused by certain pathogenic bacteria.

Dr. William B. Castle, of the Thorndike Memorial Laboratory, Boston City Hospital, has recently reported to the American Society for Clinical Investigation, an account of his work with his colleagues, on pernicious anemia. He claims that through his researches a hitherto unknown substance found in the secretions of normal human stomachs is conspicuously lacking in the stomach of those suffering from pernicious anemia. Dr. Castle called the new substance the essential factor of the normal gastric juice and observed that none of the existing tests for stomach function would detect its presence specifically. When this new substance is given to the patient with beef muscle in a solution that is neutral, neither acid nor alkaline, an effect is produced which promptly benefits the pernicious anemia victim, exactly as does liver.

According to an article in *Science News-Letter*, Prof. Thomas V. Moore, psychiatrist of the Catholic University of America, has combined his knowledge of mankind's mental failure with his skill in handling involved mathematical procedures. After centuries of studying living patients, and from autopsies, doctors now know the symptoms that point to hundreds of bodily disease. The patient who is ill mentally may have no diseased condition that can be traced. To measure and chart symptoms pointing to fundamental mental disorders, Prof. Moore has resorted to exact statistical procedures. He has determined the existence of 41 different symptoms, and 8 syndromes or fundamental factors. This investigation is practically the first attempt to apply the statistical procedures to mental diseases.

Dr. J. A. Pfeiffer, of the University of Maryland Medical School, has announced the isolation of a microscopic organism and its identification as the source of colds. Dr. Pfeiffer stated before the Maryland Biological Society that he was certain that this micrococcus is the one responsible for colds, and that persons can be immunized against its attack. Both these points have been proved on animals and humans. The organism is entirely new to bacteriology. Dr. Pfeiffer has spent seven years in identifying this organism and in proving his discovery. He has worked out a vaccine which has been found to be successful in experiments, and is working on an antitoxin. The results, Dr. Pfeiffer claims, show that it is possible to immunize an individual against catching colds for one to three years. It is possible, he said, with a vaccine, to break up a cold. The Abel Fund group of scientists are studying the effects of the vaccine for preventive inoculation, on four graduates of Goucher College.

Sleep and Longevity

Nikolas Tesla, the physicist, has been quoted as saying that if a man slept enough he should live to be a hundred years old. This statement contains a gem of scientific truth, for age and death mean vascular disease, and its sequels, of which overwork and underrest, with uneliminated waste, are most important causes. Wear and tear are not repaired; disintegration exceeds regeneration. Other causes are infectious diseases, intrinsic intoxications, and hereditary influences, but the operation of these and their results are not so easily neutralized. Sleep brings rest, recuperation, restoration of metabolic and functional equilibrium, with conservation of the integrity of the blood vessels, and life.

The Uncleanliness of Streets

The uncleanliness of many streets, city and town, is a great source of discontent. It is unsightly, but worst of all too frequently is unsanitary. As soon as they are clean "the pocket emptiers, the gum chewers, the candy eaters, the smokers, and the great mass of the tribe of strewers and litterers quickly make them dirty again."

What can be done to impress upon people the fact that a street is not a scrap basket? Many communities have laws governing this matter, but do not enforce them. It would seem that a county medical society, with the aid of its respective woman's auxiliary, could do much to correct this unnecessary evil.

We were somewhat elated to observe the following occurrence. We were driving along one of the highways "up State," in back of a 5-seated car, containing one man (at the wheel) and four women, all evidently between 20-25 years of age, with the "ear marks" of tourists. The car carried a Pennsylvania license. These tourists were throwing out debris as they were moving along.

Just back of us was an officer on a motor cycle. While passing through a small, but very well kept town, some one in the tourists' car threw out a torn up letter. The officer rapidly overtook the car in question, and ordered all the occupants out to pick up the numerous, and widely scattered pieces of papers. To say they were angry is putting it mildly. At the same time he gave them a wonderful talk on the subject of littering the highways while passing through areas of civilization.

It would seem that the strong arm of the law is the solution to the problem of uncleanliness of streets.

Mustard Gas Held Barrier to Cancer

A British scientist, Prof. R. D. Passey, of Leeds University, has discovered that mustard gas will prevent cancer which is usually produced by the irritating action of tars. It is the first discovery of a true anticarcinogenic agent. Just how the discovery can be applied to fight against cancer in human beings remains to be developed. So far it has only been used on mice.

Another interesting research recently announced is of the efforts to induce cancer in mice by rubbing them with tar made of tobacco. These have failed completely, which indicates that smoking may not be as causative an agent of cancer as is at present supposed.

The work done at the Birmingham General Hospital and Prof. Passey's discovery are in the annual report of the Council of the British Empire Cancer Campaign. The report revealed use of wartime mustard gas in combating the disease. It was stated "the induction of tumors is inhibited when mustard gas is applied to an area of skin which is being subjected to painting with tar."

Action of the gas was explained as being localized to the particular area under treatment and its cure to be strictly limited in time, "but none the less on that account a remarkable cure."—*Philadelphia Public Ledger.*

PHYSICAL THERAPY

Opportunities in Physical Therapy

There is, at the present time, a splendid opportunity for younger physicians who have had adequate training in general medicine or surgery to enter the specialty of physical therapy. Good, conservative men are needed in this field.

The editor of this column wrote a criticism on the report of the Council on Physical Therapy, on Medical Education (see PENNSYLVANIA MEDICAL JOURNAL, April, 1930, p. 487). In this criticism, he urged that all instruction in physical therapy be given by the director of the Physical Therapy Department of the teaching hospital.

In a reply to this editorial, the secretary of the Council stated: "The Council is inclined to agree with you that there should be in each medical school a department of physical therapy under a qualified director with its teaching available to all other departments of the school. However, *it is impossible to obtain a sufficient number of physical therapists* with the comprehensive knowledge required for adequate teaching of every phase of physical therapy."

The writer recently received a letter from a very well-known physical therapist in New York City, who stated that he was searching for a "salaried, fully-trained, full-time director" for the physical therapy department of a large hospital, but that, so far, "even in this big metropolis, a month's search for such a man is fruitless." He adds, "neglect of the medical schools to add the subject to the curriculum is, of course, to blame."

There is a golden opportunity for qualified men to fill such vacancies. Physical therapy, at present, is almost a virgin field. It now occupies about the same place that roentgenology did, thirty years ago. While it is still neglected in most undergraduate medical courses, there are, nevertheless, several universities in which postgraduate instruction may be obtained.

Physicians who are interested in graduate courses should write to the secretary of the Council on Physical Therapy of the American Medical Association, whose duty it is to supply information about physical therapy; or, if they care to write to the editor of the Physical Therapy Column of this JOURNAL, he will be glad to supply information on graduate courses in physical therapy.

Meeting of American Congress of Physical Therapy

The ninth annual session of the American Congress of Physical Therapy will be held at St. Louis, Mo., September 8 to 12, 1930.

The official headquarters will be the new Hotel Jefferson.

The feature will be "A Postgraduate Week of Physical Therapy."

There will be a most complete program. There are sections on Medicine; Surgery; Eye, Ear, Nose, and Throat. There will be a conference on Education in Physical Therapy.

The meeting promises to offer the most complete conference on physical therapy ever presented.

The retiring president is Dr. Norman E. Titus. The president-elect is Dr. Roy W. Fonts.

Physical Therapy and the Technician

According to Dr. Harry E. Mock, in *The Physiotherapy Review*, only a few hospitals as yet recognize a further responsibility to the patient than the mere medical and surgical relief of his ailment.

The enlightened hospital of today must install additional facilities acting as adjuncts to the medical and surgical treatment of disabilities. Physical therapy, that is the adaptation of proved physical measures to therapeutive purposes, furnishes the most important adjunct. If a hospital is equipped with a physical therapy laboratory the physical measures can start almost simultaneously with the usual medical and surgical procedures.

Frequently physical therapy must continue for weeks after the primary medical or surgical treatment has ceased. In these cases it is better, if possible, to discharge them from the hospital and hospitalizing influences.

The chain of treatment in many chronic cases can be divided into two stages and includes the following:

(a) Primary stage or hospital stage: (1) Surgical treatment, operative and nonoperative. (2) Routine surgical dressings. (3) Physical therapy while in the hospital.

(b) Secondary stage or after the patient is able to leave the hospital: (1) Physical therapy at the physical therapy laboratory. (2) Surgical dressings if still necessary in the surgical dressing room of the laboratory by an assistant familiar with the case. (3) Teaching some member of the family essential features of physical therapy to be administered by them when patient is from out of town; patient to report back for more extensive treatment weekly or fortnightly. (4) Weekly examination of patient by surgeon and consultation with physical therapist to observe progress and to guide treatment to its desired end. (5) In certain cases, referring them to proper agencies for retraining for work and replacement at suitable employment, thus completing the cure to the period of economic usefulness.

Without the aid of physiotherapy both in the hospital and after discharge, this rehabilitation of a great number of patients could not be accomplished.

One-Stage Tonsillectomy by Surgical Diathermy

Henry J. Millstone, in the *American Journal of Physical Therapy*, writes that the one-stage tonsillectomy by coagulation is a permissible, sane, and scientific procedure. It eliminates the undesired inconvenience of repeated visits and the nervousness exhibited by many patients in having to return many times for treatments.

It is of great advantage and convenience to patients who are constantly in transit such as travelers, members of the theatrical profession, opera singers, artists, and multitudes of others whose vocation permits minimum of time for medical attention.

The proper needle used avoids extrinsic sparking and the adjustable adapter eliminates loss of time and changing of needles.

The imperative cautions: avoid pillars, over-coagulation and charring. Surgical diathermy of the tonsils will accomplish everything any other method will do without injuring normal surrounding tissue or disturbing the normal physiology of the throat.

Infra-red Transmission of the Flesh

According to an article by C. H. Cartwright, in the *Journal of the Optical Society of America*, photographs

of the spectral transmission of the cheek show 14 per cent transmission at 0.86μ and 20 per cent at 1.15μ Fat, as exemplified by bacon fat, is still more transparent. The water in the body cuts off the longer wave-lengths. From these measurements it was concluded that an ordinary incandescent electric light with filters to cut out the visible and infra-red beyond 1.4 is ideal for deep penetration of light into the body, without overheating the skin.

Gastro-Enterostomy with Surgical Diathermy

Victor-Pauchet et al. report favorable results with the use of this technic in three patients, two of whom had cancer of the stomach. They did not use any clamps and there was no need to check bleeding. Only the muscles of the stomach and jejunum were cut and one row of sutures was placed. The mucosa opened spontaneously several hours after the operation or the next day. The only difficulty according to the authors is the determination of the degree of heat necessary to bring about the separation of the mucosa.—*J. A. M. A.*

New Apparatus for Diathermic Application of Heat

Nagelschmidt describes the apparatus, which he holds is more convenient and less dangerous than the type commonly used. Treatments may be given for from four to five hours at a time. The apparatus can be used for heating the thorax in pneumonia, the brain and spinal cord in cerebrospinal meningitis, and the pelvis in gonorrhea, and also it might be used to produce an aseptic fever for combating infectious disorders, in which would be eliminated injurious effects of ordinary fever while retaining the protective qualities. It is necessary that the apparatus be so regulated that the body temperature be never raised more than 106.5° F. —*Medical Times.*

HOSPITAL ACTIVITIES

Patient's Record—*Continued*

Final examination previous to discharge.—A final examination should be made and recorded of all patients previous to discharge, or leaving after signing a release. This is an essential part of the record of the patient, and not only affords valuable data for the study of end results and assembling statistics, but also serves as a protection for the hospital. All these are of value only to the extent of the accuracy of the final examinations and the interpretations based thereon.

Medical patients.—The final examination should show any improvement or not, and to what extent. Any complications that have occurred should be noted, and any effects present at the time of discharge. Any information that will be of any value as to date of discharge should be recorded. It would be in order to state to whom the patient is being referred for further treatment, the family doctor, dispensary, etc.

Surgical patients, including the surgical specialties.—Record the general condition, and extent of improvement or otherwise; whether the incision has healed by first or second intention, or if not healed, to what extent; if any nonabsorbable sutures or gauze drains or rubber tubing, or any foreign object that will subsequently require removal. This latter is all important, for protection to the operator and the hospital. Now and then suits are brought for alleged malpractice because such foreign material was not removed, and was subsequently detected by the family doctor, upon probing to determine the cause of an unhealing [illegible] or in other manner. Not infrequently when [illegible] called accidents happen in a ward patient, the [illegible] apt to try to pass the responsibility to the intern. When foreign objects are purposely allowed to remain, the patient or responsible head of the family should be duly advised, also the physician to whom the patient is to be referred for subsequent care.

Obstetrics.—The final examination in the maternity service involves both the mother and the baby. As to the mother, record removal of sutures, healing of lacerated structures, whether the genital lacerations are recent or due to previous labors, the extent of support afforded by the vaginal walls, the variety and degree of lacerations of the cervix (do not dismiss with the statement—lacerated cervix), the position of the uterus and extent of involution, and the condition of the adnexa. If a cesarean section was done, reference should be made to the healing of the incision; and always state the general condition of the patient, including the nipples and breasts. As to the baby, whether on breast or artificial feeding and to what extent, loss in weight, any references applicable to a circumcision, and in case of injuries sustained, the extent and effects.

The difficulty frequently arises in the end results of treatment to determine the proper application of cured, improved or unimproved. Some institutions in their records of surgical patients, state only cured or died, all patients who do not die, being recorded as cured.

The chief should always advise the intern whether to record cured, improved, or unimproved. It is not always possible to make an accurate record in this regard. For example may be mentioned a patient under treatment for sterility. If any operation is done, and the patient does not die, she is discharged cured. So far as operation is concerned, she may be cured, but the end result as to the cure of sterility cannot be determined until after the patient is discharged. A follow up will be required.

We would urge the necessity of all hospitals in demanding a properly made and recorded final examination of every patient discharged from the hospital, and of those leaving of their own accord after signing a release.

Eliminating the Explosion Hazard in Operating Rooms.—Hoover and Cutler state that the matter of the explosion of anesthetic gases in operating rooms has recently commanded widespread attention, because of the increased number of such unfortunate occurrences in reported explosions concerning the use of the new anesthetic gas, ethylene, that such cases may represent a serious increase in the actual number of such accidents. It appears that the explosions always centered about the anesthetic machine where two sources of static discharge are present: (1) contact between the machine and other apparatus or individuals; and (2) the discharge of static occurring in connection with the anesthetic machine itself and independent of outside conditions.

Oxygen and nitrous oxid are supporters of combustion, but of themselves will neither burn nor explode. It is perfectly safe, therefore, to use these gases for anesthesia purposes in practically any case. Since practically all other known inhalation anesthetic agents are explosive or form explosive vapors and since it is not always so easy to eliminate the sources of ignition, the use of nitrous oxid for producing anesthesia is most highly recommended.

There are cases in which other anesthetics are desirable or must be used. In such cases explosive or

inflammable vapors are certain to exist in the operating room. It should be realized that 2 per cent of ether or ethylene vapor in a room produces an explosive mixture. Two per cent is not a large quantity and unless there is some particularly effective system of ventilation, this quantity will soon collect in a room, at least in the neighborhood of the patient and the anesthetic machine. It is absolutely necessary to remove all sources of ignition if an explosion is to be avoided. Since these sources of ignition are varied in character and the methods of their elimination likewise varied they will be considered under separate headings.

Open flames: The first type of hazard to be considered is the open flame. This type includes gas or spirit burners, smoking in any form, and the like. Hazards of this character need not be amplified or explained in great detail because they are understood. It suffices to say that the presence of anything of this character in an operating room is little short of suicide.

Open sparks: The advance of industrial electricity has made its mark in surgery as well as in other fields. As a result we find today a multitude of electric appliances and apparatus in the hospitals. In many of these appliances open sparks are necessary for, or exist as a result of, their operation. If such apparatus is used in the operating room, with inflammable anesthetics, it is a decided hazard. Apparatus of this character belongs in the same classification as open flames. In fact an electric spark may, under certain conditions, ignite an explosive mixture even more readily than an open flame.

Spark producing equipment: Apparatus coming under this classification includes electrosurgical units of the character of high-frequency knives, cautery, diathermy, coagulation, and fulguration units, radiographic, fluoroscopic, or x-ray equipment of the open or unprotected type, electric motors of the commutator type and open switches and rheostats. It is impossible to give a complete list of equipment that should be included in this class, but in general it may be said that if the apparatus or its control equipment produces a spark or is capable of producing a spark, it should be included. It is absolutely necessary, therefore, to prohibit the use of any inflammable anesthetic when apparatus of this class is being used in the operating room.

Thermal cautery: Under the classification of thermal cauteries are included all types of heated wires or elements. These usually consist of electrically heated wires. These wires being heated to a dull or possibly cherry red the temperature is in the neighborhood of 500° C. to 600° C. This temperature is certainly not far from the minimum temperature required to ignite ether and ethylene vapor, and a review of the literature concerning this point does not help to settle the matter. Apparently many investigators have determined by various means the minimum temperature required to ignite ether vapor, and their results are widely different. The temperatures vary all the way from 180° C. to 1000° C. for approximately the same composition or proportion of ether to air. It is very possible and probable that this wide variation in observed values is due to the catalytic action of the heated elements, although none of the investigators seems to have considered it.

As a result it may offer a controversial point whether or not thermal cauteries of this type constitute a hazard. It should be realized, however, that they approach the danger zone and that the factor of safety is not large to say the least. It would be desirable to have some reliable and comprehensive research undertaken to determine this point and eliminate the doubt that now exists. Until such time, no undue risks should be taken with this type of thermal cautery.

Static electricity: This presents today a most pernicious hazard in operating rooms. A surgeon or attendant may become electrified by merely walking across the room or by brushing against the coverings of the operating table. Gases within the anesthesia machine may become electrified by friction within valves when expanding from a high to a low pressure. The rubber bags associated with the anesthesia machine may become electrified by the normal expansion and contraction produced by the breathing of the patient. The danger is that these charges cannot leak off to ground over the surface of insulating materials and thus remain in situ until a sufficient potential is built up to produce a discharge through the air, that is, a spark. It is absolutely necessary to provide some means of getting rid of these static charges as rapidly as they are formed and thus prevent an accumulation sufficient to produce a spark.

The results of the investigation made by the authors show it is not sufficient to ground all metal objects in the room. In fact, this practice may only enhance the danger because attendants walking about the room may still become electrified and, when they approach a grounded object, the spark discharge will invariably be more intense than if the object were not grounded. The only safe solution is to maintain a high humidity in the operating room. It is a well established fact that when the atmosphere is sufficiently humid all objects become coated with a surface film of moisture. This moisture film is at least partially conducting for these static charges and they soon leak off to the ground. When the humidity is sufficiently high it is impossible to electrify objects by friction because the charges leak off as rapidly as they are formed. It is interesting to note that glass and glazed tile cannot be electrified by friction if the relative humidity is above 45 or 50 per cent; bakelite, 50 to 55 per cent; and celluloid, 50 to 55 per cent. Rubber was quite varied in its properties. It was found, however, that by scuffing along the floor, a form of rubber matting, with either leather or rubber-soled shoes, only a trace of static charge could be detected at a relative humidity of 65 per cent. This particular combination retained its ability to become electrified even though the humidity was raised to 85 per cent. Since it is practically impossible to maintain a relative humidity of 85 per cent in an operating room, it would seem desirable to prohibit the use of woolen blankets in operating rooms. Subject to this restriction the investigation would indicate that a relative humidity of 65 per cent should be maintained in the operating room in order to prevent static electric discharges.

A relative humidity of 65 per cent is not unduly high and can easily be maintained by a humidifier. During the winter months in the northern climates when the outside temperature drops there may be some condensation of moisture on the windows. If this should prove troublesome or undesirable it can be remedied by the use of double windows. If the temperature of the room is held between 65° F. and 73° F., this humidity will not be uncomfortable and, in fact, from a physiologic point of view, it is much more desirable than the dry atmosphere of most steam-heated rooms. The maintenance of high humidity in the operating room will not, however, prevent the formation of static charges within the anesthesia machine, and it is as important and necessary to eliminate these internal charges as those

external to the machine. There are records of disastrous explosions in which the cause was internal to the machine and undoubtedly caused by static discharge. Metallic inserts properly constructed inside the rubber hose connection of the machine will remedy the situation. Such metallic inserts cannot easily or satisfactorily be placed in the breathing bags. The only alternative is to keep the inside of the bags moist. This may be accomplished by the insertion of small sponges thoroughly saturated with water before each operation, or else by the use of machines that bubble the gases through water. It is preferable to use machines that bubble the gases through water because this procedure eliminates the possibility of error through a failure to insert the saturated sponges. From this point of view of the protection afforded, either method is perfectly satisfactory, but one or the other should absolutely be used.

Spontaneous combustion: It is a well-known fact that an oily rag carelessly thrown into a corner somewhere has set many buildings on fire. It probably is not so well known that the same oily rag if placed in an atmosphere of oxygen or nitrous oxid will burn much more quickly. Moreover, oily rags are not the only offenders in this respect. Many combustible materials and particularly oils and greases are subject to spontaneous explosion when in an atmosphere of oxygen or nitrous oxid, especially when under pressure. Disastrous explosions have occurred in which some workmen carelessly or without knowledge of the danger, merely used oil as a lubricant on oxygen compressors.

In this connection it should be pointed out that mixtures of oxygen or nitrous oxid with practically any of the other anesthetizing agents are subject to spontaneous explosion if the pressure is sufficiently high. This means that the anesthesia machine should be so constructed that the various gases cannot under any circumstance mix while under pressure. If this precaution is not taken an explosion is certain to result.

Periodic inspection: A further precautionary measure to reduce the fire and explosion hazard consists of a regular or periodic inspection of all electric equipment, fixtures, extension cords, and outlets of the operating room. Probably the most malicious of all hazards are loose contacts, worn cords, grounded fixtures, and the like. A loose contact on a lamp or other piece of otherwise harmless apparatus is certain to result in arcing or sparking and this, in turn, results in trouble. The only remedy for this is a periodic inspection of all equipment and fixtures in the operating room.

Summary: A list of recommendations that should be followed in order to reduce or eliminate the fire and explosion hazard in operating rooms is given here: The prohibition of open flames and smoking in the operating room. The maintenance of a relative humidity of 65 per cent, or higher, in all operating rooms. The exclusion of woolen blankets or woolen fabrics from operating room use. Anesthesia machines of the type that bubble the gases through water or a strict adherence to the practice of inserting saturated sponges in the rubber bags each time the machine is used. The absolute prohibition of the use of oils or greases for lubricating the anesthesia machines. With the use of electric apparatus that produces or is capable of producing an open spark, the prohibition of explosive anesthetic agents such as ether and ethylene. The exercise of considerable precaution when thermal cauteries are used in the presence of inflammable anesthetics. A thorough inspection at least once every six months by the electrician or other competent person, of all outlets, fixtures, lamps, cords, and apparatus of the operating room, with particular care given to locating grounds and loose contacts, and immediate attention to needed repairs or the removal of defective apparatus from the operating room.—*Modern Hospital.*

Loudspeaker for the Heart.—An electric recorder for the heart beat has been devised, and may be installed in the operating rooms of hospitals so that the surgeon may be kept informed of the condition of heart of the patient. This apparatus amplifies the small electric currents produced by the heart beat until they are increased several thousand times. This apparatus would facilitate the work of the surgeon who at present must rely on the anesthetist and the patient's pulse.

MEDICOLEGAL NOTES

Injured Employee Justified in Refusing Operation.—In passing on a claim for an award under the Georgia Workman's Compensation Law, the Supreme Court of the state in American Mutual Liability Insurance Company vs. Braden, has ruled that under certain circumstances an employee may refuse to submit to an operation. This court upheld a judgment of the superior court which set aside an order of the industrial commission which denied compensation to an injured employee on the ground that his refusal to accept surgical treatment tendered to him by his employer was unreasonable. The operation involved a reopening of the injured employee's leg and a rebreaking or a readjustment of the bones, an operation accompanied with danger to life and intense pain and suffering. The delicacy of the operation required a very skilled bone specialist. It did not appear the services of such a surgeon were tendered the injured employee. In such a case it was ruled that an injured employee is justified in refusing to accept surgical treatment tendered him by the employer, where the treatment is dangerous to life or health and is accompanied with extraordinary pain and suffering, and where it does not appear that the treatment tendered could reasonably be expected to relieve the injury.

Trichinosis.—About two years ago a man died in the Clearfield Hospital as the result of a malarial infection, a microscopical diagnosis having been made prior to death. The deceased had an accident insurance policy of $5000.00. He also had a close relative who was a shrewd lawyer. The lawyer learned from the medical profession that there was no way in which a person could contract malaria except from the bite of a mosquito, which he claimed was accidental and that the beneficiary of the estate was entitled to the amount of the insurance policy. The policy was paid.

Within the past two or three months, according to newspaper reports, there have been several deaths at or near Reading from trichinosis. According to Dr. Eugene R. Whitmore, of Washington, writing in Tice's *Practice of Medicine,* this infection is also an accident. We don't know whether the lawyers of Reading have made an attempt to collect insurance from their deceased clients who expired from this disease or not.—*The Clearfield County Medical Society Bulletin.*

Daylight or Standard Time Records?—On May 1, at Dobbs Ferry, N. Y., a hospital recorded the birth of a baby as 12.30 a. m. daylight saving time. The mother insisted that the birth of the infant was at 11.30 p. m. standard time, April 30. Officials in Albany

were appealed to, and the mother's contention was upheld. It is obligatory in the United States that all births and deaths shall be recorded in standard time for the respective community.

Death by Sunstroke.—The United States Supreme Court has just been asked to review the question of whether death caused by sunstroke is a death caused by accidental means. The insured, a real estate broker was forced to perform an unusual and unexpected service in going to the roof of the building to induce the contractor to proceed with the work. The day was hot and, because of the height of the buildings surrounding, the air did not circulate as it should. These unusual circumstances it is alleged caused the death. The Supreme Court of the United States has never decided any insurance case wherein this question was raised. The petition does not claim that high temperature of itself is an accident, but asserts that where, out of 1,000,000 persons, the insured was singled out for death by sunstroke, the cause of his death was accidental. The Circuit Court of Appeals held that the death was not accidental.

Restricted Licensees Denied Right to Drugs.—According to the Illinois medical practice act of 1923, holders of restricted licenses may not use anesthetics and other drugs and medicines in obstetrical cases, if their licenses restrict their practice to osteopathy and obstetrics. The attorney general of the state made the decision that the practitioner who possessed a restricted license voluntarily imposed upon himself the limitations under which he practices.

To Protect Impaired Vision from Harmful Wares.—The last session of the legislature of Minnesota, amended the optometry law to further protect the public against what is commonly known as the glazed goods evil, and now requires that departments where glasses are sold as merchandise and not on prescription, be in charge of a licensed person. The validity of this particular feature of protection to the public has been upheld by the United States Supreme Court, the decision being one of the last of the former Chief Justice William Howard Taft.

INDUSTRIAL MEDICINE

Sickness Among Industrial Employees During the Last Quarter of 1929.—The United States Public Health Service points out that an influenza epidemic was in progress during the final month of 1928, affecting adversely the rate of sickness in the fourth quarter of that year. For this reason the disability rate for the last three months of 1929 among a group of about 110,000 industrial employees makes a favorable comparison with the rate for the corresponding period of the preceding year. The respiratory diseases show the greatest decrease, the rate was little more than one-half that experienced in the last three months of 1928. The incidence of tuberculosis declined 20 per cent. Because a number of the reporting associations do not pay sick benefits for disability on account of the venereal diseases, for illness resulting from the violation of any civil law, for the results of willful or gross negligence, and for certain other causes, perhaps the recorded sickness presented understates to some extent the real magnitude of the incidence rate of cases causing disability for more than one week.

Child Labor Industrially Wasteful.—Child labor is detrimental to the growth and physical development, deprives the individual of education, limits his development as a citizen, and is industrially wasteful, according to the Children's Bureau, Department of Labor. Another finding of the Bureau was that children are more prone to accidents than adult workers. It was pointed out that the thoughtfulness natural to their inexperience and years and ignorance of consequences make them careless of machinery. Thousands of industrial accidents, the survey reveals, are reported annually, and of these many result in permanent loss, or loss of use, of a member. The imperfect coördination of the muscles of children renders them more likely to make some movement leading to injuries.

Industrial Waste Traced to Eyes.—Two of the chief causes of waste in industrial life, are defective eyes and eyestrain according to Dr. John Welsh Croskey, consulting ophthalmologist of the Philadelphia General Hospital. Man, instead of using his eyes almost entirely for long range and under conditions for which the eye is not adapted, employs them continually for close-range work, and subjects them to continual exposure to glare from sidewalks and buildings, or from high-power electric lights. Dr. Croskey claims that for most of us fifty years would be too old to work and the evenings of our lives would necessarily be spent in idleness if it were not for glasses.

Examination Car for Employees.—Dr. A. R. Metz, chief surgeon for the Milwaukee Railroad, conceived the idea of an examination car equipped with roentgen ray and other apparatus to be used for the physical examination of employees engaged in train operation and applicants for this service. It will be used over an entire system to supplement the work now performed by the road's physician and surgeons. A first aid room is included. Employees' records and the findings of the examining board are carried in the office section of the car. In addition to contributing to the safe operation of trains, the examination car will give the employees now in service an opportunity to learn of any early physical defects they may have which can be corrected.

Effect of Heat on Workers.—Dr. R. R. Sayres, chief surgeon of the bureau of mines, claims that atmospheric conditions such as temperature, humidity, and air movement, under which persons live and work, have a notable effect on their efficiency, health, and comfort. It is stated that a 30 per cent loss of efficiency, through defective mine ventilation, among men working underground at Butte, Mont., is probably a conservative estimate, but figured for each of the 13,000 underground workers in 1917 and 1918, with a wage of $5.75 per shift, this loss amounts to $22,425 daily. The New York State Commission on Ventilation has studied whether the disinclination to do muscular work in hot weather is accompanied by actual lessening of working power, and found that even when men were urged to work, they accomplished 28 per cent less per day in an atmosphere of 86° F., 80 per cent relative humidity, than at 68° F., 50 per cent relative humidity.

PUBLIC HEALTH

Deaths from Influenza.—The United States Public Health Service has just reported that about 250,000 deaths resulted from influenza epidemics in this country during 1920 and the middle of 1929. This total is nearly half that of the deaths in the United States during the epidemic of 1918-19. The last epidemic,

1928-29, accounted for about 50,000 deaths, while another 100,000 deaths occurred during the epidemic of the spring of 1920.

Spread of Pellagra.—In many of the southern states, owing largely to the continued drought and extended heat spell, pellagra is spreading with rapidity. The Public Health Service has spent many years in the study of the cause and effects of pellagra. Tests proved that the disease is caused directly by improper diet, and the lack of water and extended periods of heat are responsible for the unbalanced diet of certain groups of people in the affected states.

Meningitis.—Dr. R. C. Williams of the United States Public Health Service in a recent paper stated that there has been a progressive increase in the number of cases of meningococcus meningitis in this country during the past five years. The control of this disease is extremely difficult. Studies conducted in various parts of the country failed to produce any new methods of importance.

Smallpox.—Statisticians of the Metropolitan Life Insurance Company claim that there is constant danger of a widespread outbreak of smallpox of virulent type in the United States because of the many susceptible persons. Until this number is greatly reduced by general acceptance of vaccination there will be no real security against smallpox. Forty-four states, the District of Columbia, and eight Canadian provinces reported more cases of smallpox in 1929 than in 1928 or 1927. In El Paso, Texas, in 1929, there were eleven deaths among fifty-nine cases. If this same ratio of deaths to cases had prevailed among the 38,063 persons who had smallpox in forty-five American states last year, approximately 7100 deaths from this disease would have resulted.

Typhus Fever Carriers.—The United States Public Health Service is trying to discover the carrier of the typhus fever organisms. In the Old World, it is the body louse that transmits the disease, but in the patients suffering from this fever, in no instance had lice on their bodies or clothing, only negative evidence that the louse is not the carrier. This disease has existed in endemic form in the United States for several years, and no alarm need be felt about any epidemic because of the present outbreak of cases in Virginia and Maryland. At present, ticks, blood sucking mites, and fleas are some of the insects being held under suspicion, and being investigated as possible transmitters of typhus fever.

Public Health Service to have charge of Prison Medical Work.—The Department of Justice has requested that, because of the growing and general dissatisfaction with the existing medical services in the federal prisons of the United States, this work be given to the Public Health Service. The Public Health Service assumed control of the work about July 1, and the first changes were to supplement some of the existing medical staffs with the officers of the Service. It is desired by the Assistant Surgeon General, Dr. Walter L. Treadway, and the Superintendent of Prisons of the Department of Justice, Sanford Bates, to supply more of a personal touch to the care and treatment of prisoners, with the hope of ultimately making some of them into useful citizens.

Longevity and Heredity.—Dr. Louis I. Dublin, statistician of the Metropolitan Life Insurance Company, at the recent meeting of the Eugenics Research Association, reported that heredity as well as environment affects the length of man's life. Dr. Dublin studied the longevity records of over 70,000 white men from the date of their insurance at the beginning of the century to 1928. He divided the group in two sections: those whose parents died before 50 years, and those whose parents were living after 50 years. Members of the second group were found to have a life expectancy of 2½ years longer than members of the first group. These results of Dr. Dublin were confirmed by studies of records of 34 American and Canadian life insurance companies, between the years 1869 and 1900.

Fewer Pennsylvania Births Last Year.—During the 24 years of registration of births in Pennsylvania, the infant death rate has decreased from 167 per 100 live births in 1906 to 70 in 1929, according to preliminary figures for last year as prepared by the Bureau of Vital Statistics, State Department of Health, June 25. In the first year of registration, only three cities of 10,000 population or over recorded infant mortality rates under 100, while last year Dunmore, Steelton, and West Chester were the only localities which had infant mortality rates of over 100.

The bureau, however, directed attention to the unreported births in the early years of registration to explain the high death rates of 1906, and also declared that the actual number of infant deaths last year, although the lowest on record, created a higher rate than 1927 because of the decrease in births. There was a decrease of 11,000 in births between 1928 and 1929 and that naturally kept the death rate up, the report set forth, adding that if the number of births in 1920 had equaled that of 1927, Pennsylvania could have registered with pride an infant death rate so low as 63 per 1000 births.

The progress made in the last 20 years in public health is credited by the bureau for the decrease in the infant mortality rate. Prenatal care, strict regulations governing milk and water supplies, and greater attention to child welfare generally as a health problem are responsible for this decrease, the bureau reported. The greatest reductions in infant deaths have been in the preventable diseases, particularly diphtheria, measles, scarlet fever, and whooping cough.

The infant mortality rate, which is based on deaths of children under one year of age, does not reveal, the bureau stated, that 56 per cent of the infant deaths in 1927 were at an age of less than one month and 23 per cent at an age of less than one day.

Small Proportion of Educated Class is Addicted to Drugs.—The Public Health Service has announced that less than 3 per cent of a group of 2000 violators of the antinarcotic law were high-school graduates. This group was arrested during a three-months' period of last year, and a detailed survey of them made. Drug addiction is an economic evil, and it was observed that a large proportion of those addicted to habit-forming drugs were irregularly employed, mainly dependent, or of marginal economic circumstances. In some instances the habitual use of alcohol is connected with drug addiction, but this is generally not so. The individual who resorts to the excessive use of alcohol appears to be of a different mental make-up from those who resort to narcotic drugs. The largest class of these addicts used from 5 to 15 grains daily. The average age of the addict is 38 years; although almost one-half of the group studied had contracted the habit before the age of 24 years. Of the approximate 1600 addicts investigated,

only 34 had finished high school and only 51 had attended college. The number of addictions found among suburbanites is negligible, the majority coming from cities or strictly rural sections.

Antifat "Cures" Worthless.—The Department of Agriculture has announced that promoters of so-called obesity remedies and reducing cures are attempting to influence fat persons to spend money for worthless or dangerous preparations. The specialists of this Department know of only two safe methods of reducing—careful dieting and proper exercise. No drug or mixture of drugs known to the medical profession at the present time can be offered for the promiscuous use of the public in reducing weight without introducing an element of danger. The principal appeal of most of the promotion claims is to the vanity of the persons who wish to regain slim, graceful lines and to do it without dieting. One advertiser says that the patient can eat all he wishes and as often as he wishes, which is a strong inducement to most stout persons. Some of these preparations contain thyroid and laxatives, and others contain nothing that could possibly have the slightest effect in reducing flesh. Often patients seem to lose weight, but this is to be attributed to the hot baths and the diet and exercises recommended. As a general rule fat persons should diet and exercise under the guidance of a skillful physician. The Food, Drug, and Insecticide Administration has removed from the market many preparations falsely labeled for cure of disease and reduction of fat.

Morbidity in Pennsylvania in July, 1930

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Aliquippa	4	5	1	0	0
Allentown	8	9	6	2	23
Altoona	0	2	16	1	26
Ambridge	0	0	0	0	0
Beaver Falls	0	3	0	0	2
Berwick	0	0	0	0	0
Bethlehem	0	0	0	1	0
Braddock	0	0	1	0	3
Bradford	0	0	0	0	4
Bristol	0	0	0	0	0
Butler	0	1	0	0	9
Canonsburg	0	0	0	0	0
Carbondale	1	0	0	0	0
Carlisle	0	0	0	0	0
Carnegie	0	22	0	0	1
Chambersburg	0	0	1	1	3
Charleroi	3	2	0	0	0
Chester	0	12	0	0	1
Coatesville	1	1	2	0	0
Columbia	0	0	0	0	1
Connellsville	0	1	0	1	2
Dickson City	0	0	0	0	0
Donora	0	0	0	0	0
Dubois	0	0	0	0	0
Dunmore	0	0	1	0	0
Duquesne	0	7	2	0	0
Easton	0	6	3	0	0
Erie	3	7	2	1	35
Farrell	0	0	0	0	0
Greensburg	0	2	1	0	0
Harrisburg	0	0	0	0	11
Hazleton	5	6	0	0	6
Homestead	0	0	1	2	0

Morbidity in Pennsylvania in July, 1930

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Jeannette	0	6	0	0	0
Johnstown	3	6	13	0	30
Lancaster	0	3	0	8	8
Lebanon	1	0	0	0	1
McKeesport	0	2	2	0	0
McKees Rocks	1	2	0	0	2
Mahanoy City	5	3	0	0	0
Meadville	1	0	1	0	0
Monessen	4	2	0	1	0
Mount Carmel	0	0	0	1	0
Nanticoke	0	0	0	0	0
New Castle	0	2	0	12	1
New Kensington	1	0	0	0	4
Norristown	1	15	0	0	0
North Braddock	2	1	0	0	0
Oil City	0	1	0	0	18
Old Forge	1	0	0	0	0
Olyphant	2	0	0	0	0
Philadelphia	44	314	108	6	100
Phoenixville	0	0	0	0	0
Pittsburgh	53	336	72	1	142
Pittston	0	0	0	0	0
Plymouth	0	1	0	0	0
Pottstown	0	2	3	0	9
Pottsville	0	1	0	0	2
Punxsutawney	0	0	3	0	0
Reading	4	4	3	0	34
Scranton	2	3	4	0	23
Shamokin	0	0	0	0	0
Sharon	0	0	0	1	2
Shenandoah	0	0	0	1	0
Steelton	0	0	0	0	0
Sunbury	0	1	1	0	0
Swissvale	0	8	3	0	7
Tamaqua	0	0	0	0	0
Uniontown	0	2	1	0	3
Warren	0	27	0	1	6
Washington	0	1	0	0	7
West Chester	0	0	0	0	0
Wilkes-Barre	2	5	6	0	8
Wilkinsburg	1	3	1	0	2
Williamsport	0	7	0	0	0
York	1	0	1	0	4
Total Urban	154	844	259	41	540
Total Rural	141	862	200	67	370
Total State	295	1706	459	108	910

Heart Disease.—The chief of the division of vital statistics of the Bureau of Census has recently stated that despite a drop in the general death rate, credited largely to decreased infant mortality, men above 50 years are dying more rapidly, mainly because of defective or overworked hearts. The greatest difficulty in combating their ailments is that those afflicted seldom know it. Dr. Murphy, chief, advised an annual examination by a competent physician. Increased speed of business in this country, and modern means of recreation are potent factors in increasing the number of heart fatalities. In practically every state during the last ten years the death rate from diseases of the heart has increased, while most of the other causes of death have decreased.

Tuberculosis Abstracts

A Review for Physicians

PREPARED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Published through the coöperation of the Pennsylvania Tuberculosis Society and the Medical Society of the State of Pennsylvania

ROBERT KOCH in 1884 raised hopes that tuberculin would prove to be a specific cure for tuberculosis. His failure did not discourage but rather spurred on numerous other brilliant workers. A half-century of futile search has considerably dampened the hope that a single genius will solve the riddle. There is, however, promise of a solution in the joint effort of many minds. Such an effort is being made by the Committee on Medical Research of the National Tuberculosis Association, which, since 1921, has been working systematically on anatomic, pathologic, epidemiologic studies, and particularly on an analytic study of the tubercle bacillus itself. When the composition, nature, and physiology of the bacillus, as well as the body cells involved in the disease, are fully understood, it is not only possible but probable that a simple means will be found to cure and prevent tuberculosis. Dr. Kendall Emerson has given a résumé of the work and findings of this committee in the Journal of the American Medical Association, March 15, 1930, from which the following synopsis is derived.

Research in Tuberculosis

Research in the chemistry and biology of the living tubercle bacillus required far more in equipment and personnel than could be found in any single laboratory. There were, however, numerous individuals equipped to carry on highly specialized and technical research. The Committee on Medical Research, organized in 1921, succeeded in interesting a considerable number of specialists in attacking the study under a coöperative plan. Twenty-one different laboratories are now so correlated, and workers of these laboratories meet in frequent conferences under the leadership of the chairman of the committee.

Materials Standardized

In order to make the results in different localities comparable, it was essential first to standardize all products. Esmond R. Long, of the University of Chicago, produced a synthetic medium composed of chemically pure ingredients of exactly known quantities and qualities for the growth of the bacteria. As no laboratory was equipped to grow the bacteria in quantities sufficient for the desired analyses, two manufacturers, the H. K. Mulford Company and Parke, Davis and Company, generously undertook to grow and supply such raw materials. Both the bacteria and the synthetic media in which they are grown are subjected to research, the latter to determine the chemical changes occurring as the result of the metabolism of the bacteria. Up to the present time, five varieties of bacilli have been produced and subjected to analysis—human tubercle bacillus H-37, the bovine, the avian, nonspecific timothy grass, and lepra bacilli. After filtration, the bacteria are shipped to Sterling Chemical Laboratory at Yale University and the filtrate to the Department of Pathology of the University of Chicago.

Bacillus Is Fractioned

Under the direction of Treat B. Johnson, of Sterling Laboratory, the bacterial residue is broken up into isolated fractions, or pure substances, some of which were hitherto unknown to chemistry. Similarly, at the University of Chicago, the filtrate, or medium, is subjected to chemical disintegration. These several fractions are then sent to the Rockefeller Institute, where, under the direction of Florence R. Sabin, they are tested out individually on animals for their physiologic effects. At the same time, a clinical study is made of the fractions by David R. Lyman, of Gaylord Farm Sanatorium.

Thus far, there has been isolated from the

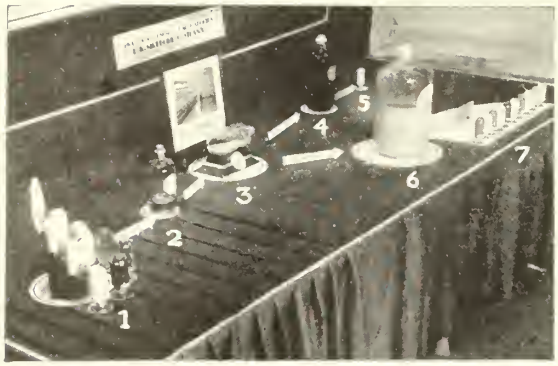

EXHIBIT ILLUSTRATING FRACTIONING OF TUBERCLE BACILLUS

1. Ingredients of Long's media.
2. Long's media.
3. Tubercle bacillus culture on Long's media.
4. Bacterial filtrate.
5. Portein 304-F precipitated from filtrate.
6. Bacteria precipitate (tubercle bacilli).
7. Pure chemical products derived from bacteria.

—Courtesy H. K. Mulford Co.

bacteria and from the medium on which they were grown a pure protein substance which produces the skin reaction typical of tuberculin. It has also been shown that a certain fat fraction stimulates the growth of the monocyte (the cell in which the tubercle bacillus grows and is conveyed) far beyond the rate of growth of other cells. It has further been demonstrated that the sugar fractions or polysaccharides of the tubercle bacillus are chiefly responsible for the fever and rapid pulse and that they possess a killing power for tuberculous animals. It appears also that it is the polysaccharides which determine the distinctions between the human, bovine, and avian types of tubercle bacillus. The task of testing and classifying the biologic effects of all the types of bacillus is still in its early stages.

Chemistry of Body Cells

The changes in living cells brought about by the action of the tubercle bacillus are being studied by R. S. Cunningham at Vanderbilt University. The fact that tuberculosis is finally a problem of the living chemistry of the tubercle bacillus in symbiotic existence with the living chemistry of body cells has led to this attempt to study the influences of various substances on the several types of cells composing the body. Supplementing Dr. Cunningham's work, Eugene F. DuBois and Paul Reznikoff, of Cornell University, are making a comparative record of the respiration rate of the living tubercle bacilli and of body cells, both before and after infection with tubercle bacillus. (Comment: If, for example, a means could be found for disturbing or disrupting the synchronism of the respiration rate of the tubercle bacillus and the monocyte, which is the host of the bacillus, the bacillus would probably perish before it had been conveyed to the soil on which its growth is possible.)

Ross G. Harrison and George A. Baitsell, of Yale University, are carrying on a study of scar tissue production, which is so important a factor in tubercle production. "It would now appear," they report, "that the finer chemistry of the development of the fibrils in the ground substances and fluids of the body has many points in common with the fibrillation of gelatin and blood clotting."

Latent Tuberculosis

A study of latent tuberculosis was started by Eugene L. Opie at Washington University in 1923. Shortly after, Dr. Opie removed to Phipps Institute, where research in childhood type of tuberculosis is being continued as a contribution to the group project. Another study is being made at Johns Hopkins Hospital by E. A. Park on tuberculosis in infancy.

L. Van Es, at the University of Nebraska Agricultural College, is studying the distribution of avian tuberculous infection in mammals other than swine.

Ernest L. Walker, of the University of California, investigated the therapeutic value of chaulmoogra oil, which study was discontinued when it was proved that this remedy, so potent in leprosy, has no effect on tuberculosis.

In his conclusions, the author states: "The work, although now pursued for a number of years, may still be considered to be in its infancy. Whither it leads, it would be idle to speculate. I believe it is no breach of confidence to say that in a recent statement to me Dr. Sabin remarked that she did not know when she had been so deeply thrilled as by the possibilities of this extensive study and the results toward which it might be leading." — *Research in Tuberculosis, Kendall Emerson, M.D., Jour. of the A. M. A., Mar. 15, 1930, Vol. 94.*

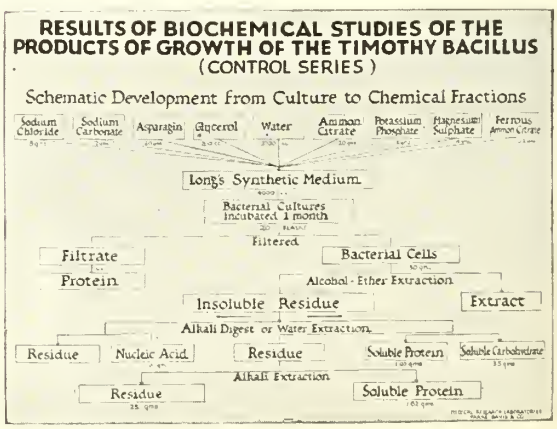

CHART ILLUSTRATING FRACTIONING OF TIMOTHY BACILLUS (CONTROL SERIES)

—Courtesy Parke, Davis & Co.

THE MEDICAL SOCIETY
OF THE
STATE OF PENNSYLVANIA

OFFICIAL TRANSACTIONS

Eightieth Annual Session

CALL TO THE 1930 SESSION

The first meeting of the 1930 House of Delegates of the Medical Society of the State of Pennsylvania will be called to order in the Ballroom of the Fort Stanwix Hotel, Johnstown, on Monday, October 6, 1930, at 3 p. m.

COMMITTEES OF THE HOUSE OF DELEGATES

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Lee M. Goodman, Jersey Shore.
J. Craig McAllister, Ridgway.

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Curtis C. Mechling, Pittsburgh, *Chairman.*
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William M. Findley, 1101 Franklin Ave., Wilkinsburg.

* The offset names are the alternates, and where street address only is given, the name of the city follows the name of the county.

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Hugh E. McGuire, Jenkins Arcade.
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Walter E. Egbert, 601 E. Thirteenth St.

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Ralph F. Merkle, 219 N. Seventh St.
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Alexander Armstrong, White Haven.
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Lewis Edwards, 792 Market St., Kingston.
Herman A. Fischer, 316 S. Washington St.
Stanley L. Freeman, 216 S. Franklin St.
Herbert B. Gibby, 96 S. Franklin St.
Nathaniel Ross, 434 S. Franklin St.
Frederick A. Muschlitz, Cash Block Bldg., Pittston.

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Wilbur E. Turner, Montgomery.
Lloyd E. Wurster, Medical Arts Bldg.

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Persis Straight Robbins, Bradford, *Secretary.*
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Jonathan B. Perrine, Grove City, *Secretary.*
Jonathan B. Perrine, Grove City.
Montrose B. Magoffin, Mercer.
Patrick E. Biggins, Sharpsville.

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J. Newton Hunsberger, Norristown.
J. K. Williams Wood, Willow Grove.
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Carl G. Kapp, Duncannon.
Lenus A. Carl, Newport.

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Henry G. Munson, S. E. Cor. 21st & Spruce Sts., *Secretary.*
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Francis Heed Adler, 313 S. 17th St.
G. Mason Astley, 5317 Master St.
John O. Bower, 2008 Walnut St.
Paul B. Cassidy, 2037 Pine St.
Henry L. Bockus, Central Medical Building.
Seth A. Brumm, 1204 Medical Arts Building.
Russell S. Boles, Rittenhouse Plaza.
Walter S. Cornell, 1919 Cherry St.
*Thomas R. Currie, 512 W. Lehigh Ave.
L. Waller Deichler, Central Medical Building.
Louis Edeiken, 1923 Spruce St.
George A. Knowles, 4812 Baltimore Ave.
Louis D. Englerth, 4912 Frankford Ave.
Sidney L. Feldstein, Medical Arts Building.
F. Hurst Maier, 2019 Walnut St.
Harry C. Fish, 200 N. 50th St.
Joseph M. Fruchter, 2045 Spruce St.
Abraham M. Ornsteen, 1922 Spruce St.
William H. Good, 5415 Rising Sun Ave., Olney.
Rose Hirschler, 1831 Chestnut St.
Isidor P. Strittmatter, 999 N. Sixth St.
Harold W. Jones, 1426 Spruce St.
David N. Kremer, 5904 Spruce St.
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Francis J. McCullough, 15th & Spruce Sts.
C. Howard Moore, 1729 Spruce St.
Harry B. Wilmer, 6013 Greene St., Gtn.
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Marion H. Rea, 141 Montgomery Ave., Cynwyd.
George C. Yeager, 1419 E. Susquehanna Ave.
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Stanley Q. West, 6312 Sherman St., Gtn.
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Andrew B. Callahan, 1829 S. Broad St.
David R. Bowen, 8th & Spruce Sts.
William N. Bradley, 1725 Pine St.
Paul B. Cassidy, 2037 Pine St.
Claude P. Brown, 24th & Delancey Sts.
Theodore Cianfrani, 1719 S. 13th St.
Harry C. Fish, 200 N. 50th St.
William C. Ely, 3912 Chestnut St.
John B. Haines, Medical Arts Building.
Ralph Getelman, 2011 Chestnut St.
Leonard C. Hamblock, 2230 S. Broad St.
Mary A. Hipple, 244 S. 21st St.
J. Norman Henry, 1906 Spruce St.
Robert J. Hunter, 2011 Chestnut St.
William N. Johnson, 6430 Germantown Ave.
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Wayne T. Killian, 4501 Spruce St.
Percy S. Pelouze, Central Medical Building.
Joseph V. Klauder, 1934 Spruce St.
Peter P. Klopp, 618 W. Lehigh Ave.
Orlando H. Petty, 1803 Pine St.
Norman L. Knipe, 2018 Chestnut St.
Samuel A. Loewenberg, 1905 Spruce St.
William B. Scull, Barlow Apt., Oxford, Pike & Wakeling Sts.
Edwin B. Miller, 2008 Walnut St.
William F. Morrison, Central Medical Building.
George Wilson, 133 S. 36th St.
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William F. White, Wellsboro, *President.*
Solomon P. Hakes, Tioga, *Secretary.*
Lloyd Gamble Cole, Blossburg.
Farnham H. Shaw, Wellsboro.
John H. Doane, Mansfield.

UNION COUNTY

Charles H. Dimm, Mifflinburg, *President.*
John W. Arbogast, Lewisburg, *Secretary.*
Oliver W. H. Glover, Laurelton.
John S. Purnell, Mifflinburg.

VENANGO COUNTY

Ardus C. Thompson, Franklin, *President.*
Audley W. Ricketts, Oil City, *Secretary.*
Paul R. Cunningham, Franklin.
Carl Y. Detar, Oil City.
George B. Jobson, Franklin.

WARREN COUNTY (WARREN)

Ira A. Darling, State Hospital, *President.*
Hamblen C. Eaton, State Hospital, *Secretary.*
Howard K. Petry, State Hospital.
Michael V. Ball, Hazel and Fourth Aves.
Ralph H. Knapp, Youngsville.

WASHINGTON COUNTY

Harry Joseph Repman, Charleroi, *President.*
Charles C. Cracraft, Claysville, *Secretary.*
William D. Martin, R. D. 2, Dunn's Station.
Frank I. Patterson, 350 N. Wade Ave., Washington.
John H. Cary, Washington.
Alexander N. Booth, Bentleyville.
Russell W. Wolfe, Taylorstown.
Clarence A. Crumrine, Washington Trust Bldg., Washington.

WAYNE-PIKE COUNTY

Robert G. Barckley, Milford, *President.*
H. L. Masters, White Mills, *Secretary.*
Arno C. Voight, Hawley.
Louis B. Nielsen, Honesdale.

WESTMORELAND COUNTY

Robert C. Johnston, New Kensington, *President.*
Charles D. Ambrose, Ligonier, *Secretary.*
Thomas St. Clair, Latrobe.
Thomas W. Moran, Latrobe.
Winfield S. Bell, Latrobe.
Paul G. McKelvey, Greensburg.
Lawrence L. Blackburn, Greensburg.
James F. Trimble, Greensburg.

WYOMING COUNTY

Clarence L. Boston, Noxen, *President.*
Lorne T. MacDougall, Tunkhannock, *Secretary.*
William W. Lazarus, Tunkhannock.
Herbert L. McKown, Tunkhannock.

YORK COUNTY (YORK)

J. Fletcher Lutz, Glen Rock, *President.*
Pius A. Noll, 117 S. George St., *Secretary.*
George E. Holtzapple, George and Princess Sts.
Lawton M. Hartman, 535 W. Market St.
Charles W. Eisenhower, 211 S. George St.
Charles H. May, 1207 N. George St.
Gibson Smith, 141 E. Market St.
Charles L. Fackler, Lehmayer Bldg.

REPORTS OF OFFICERS

REPORT OF THE SECRETARY

To the President and House of Delegates:

We reiterate our comment of former years to the effect that the greatest problem confronting our House of Delegates is the problem of awakening in the minds of our component society leaders the need for county medical society representation in the leadership of all health movements. Having for more than eighty years devoted its major activities to the development of the public's interest in health problems, our legislative body might now also undertake studies in the interest of the medical profession. We need to initiate movements that will conserve our ideals and permit medical practice to exist where it needs must be—in the realm of private initiative. Of the following the public must be constantly reminded: that (a) while the scientific phase of medical practice based on fixed, reproducible elements, may be organized and distributed by a corporation, (b) the indefinable product of observation and experience, namely, judgment, is best applied to the daily needs of the patient by the private physician.

Membership

The total paid membership August 17, 1929, was 7,756; the total paid membership August 17, 1930, was 7,769; with the following component society distribution for 1929 and 1930 respectively: Adams County 24, 23; Allegheny 1,294, 1,308; Armstrong 54, 57; Beaver 87, 93; Bedford 14, 18; Berks 160, 167; Blair 102, 106; Bradford 36, 41; Bucks 63, 62; Butler 56, 55; Cambria 167, 168; Carbon 30, 30; Center 19, 21; Chester 76, 80; Clarion 26, 25; Clearfield 60, 60; Clinton 23, 21; Columbia 32, 31; Crawford 33, 34; Cumberland 36, 35; Dauphin 172, 178; Delaware 112, 113; Elk 22, 25; Erie 156, 153; Fayette 127, 122; Franklin 52, 52; Greene 29, 28; Huntingdon 32, 29; Indiana 56, 57; Jefferson 49, 47; Juniata 8, 8; Lackawanna 231, 232; Lancaster 143, 149; Lawrence 63, 64; Lebanon 29, 31; Lehigh 128, 131; Luzerne 298, 301; Lycoming 111, 112; McKean 40, 39 Mercer 74, 71; Mifflin 23, 22; Monroe 21, 21; Montgomery 167, 169; Montour 31, 31; Northampton 135, 136; Northumberland 66, 65; Perry 14, 12; Philadelphia 2,099, 2,140; Potter 12, 12; Schuylkill 158, 156; Snyder 8, 9; Somerset 44, 37; Susquehanna 15, 11; Tioga 26, 24; Union 13, 13; Venango 50, 53; Warren 44, 45; Washington 135, 130; Wayne-Pike 29, 30; Westmoreland 178, 170; Wyoming 10, 11; York 128, 131.

Eight societies show no change in membership; twenty-eight, a gain; twenty-six, a loss.

During the year we lost 131 members by death, 24 by removal, and 61 by resignation.

Medical Defense

Members reading this portion of the Secretary's report should remember that only cases are reported in which court action has been started, and no reference is made to the numerous inquiries that are received on account of threats of suit or rumored threats. Attention is also called to the many and varied reasons for which a practicing physician may be sued for alleged malpractice, as well as to the increase in the proportion of suits based on the application of physical therapy. It is hoped that our members will more generally adopt the following as precautionary measures against failure in the defense of such suits: (1) Keep records of all

patients; (a) seek consultation in unusually difficult cases; (3) require patients refusing x-ray pictures, when requested, to sign a release blank; (4) pay annual county medical society dues before March 31.

Approved applications for defense against suits (summons served) for alleged malpractice since September 1, 1929, total 14, numbering from No. 201 to 214, inclusive:

CASE No. 201. Summons served October 21, 1929. Appearance made in court in due time. Plaintiff alleges deformity from burn cicatrix due to malpractice.

CASE No. 202. Summons served September 21, 1929. Appearance made in court in due time. Skin lesion at site of discharging mastoid sinus alleged due to burn by ultraviolet ray used postoperatively.

CASE No. 203. Summons served December 17, 1929. Plaintiff alleges fracture of spine on account of sudden and unusual force during examination by defendant.

CASE No. 204. Approved for defense October 9, 1929. Plaintiff alleges injury due to accidental ignition of wet dressing prescribed without warning of its inflammable character.

CASE No. 205. Summons served January 18, 1930. Plaintiff alleges malpractice resulting in burn from use of x-ray as therapeutic agent.

CASE No. 206. Summons served January 4, 1930. Patient alleges malpractice in burns and scars arising from diathermy treatment.

CASE No. 207. Defendant in this case associated with the defendant in CASE No. 206.

CASE No. 208. Summons served February 24, 1930. Plaintiff alleges defendant failed to diagnose dislocation of both shoulder joints.

CASE No. 209. Summons served February 19, 1930. Plaintiff alleges encephalitis due to use of sulpharsphenamin intramuscularly.

CASE No. 210. Summons served March 15, 1930. Plaintiff alleges malpractice due to breaking of needle during intramuscular injection.

CASE No. 211. Summons served March 15, 1930. Plaintiff alleges failure of defendant to diagnose fracture of dorsal vertebra.

CASE No. 212. Defendant in this case associated with the defendant in CASE No. 211.

CASE No. 213. Summons served June 23, 1930. Plaintiff alleges malpractice during ethmoidectomy and radical frontal sinus operation.

CASE No. 214. Summons served July 26, 1930. Plaintiff alleges malpractice produced at time of gastrointestinal x-ray examination by defendant.

In addition to the above the Board of Trustees approved the application of a member of the Philadelphia County Medical Society for assistance by our Society in the defense of a "criminal" suit, based on charges of having produced a criminal abortion, in which a money settlement was proposed by representatives of the so-called victim. The Board, after advising that this case be forced to an issue in court, thus establishing the position of the organized medical profession in such circumstances, took favorable action and adopted the following: "Members of the State Society, against whom, on account of their being physicians, blackmail is threatened, should be given the constitutional support of their State Society, based upon recommendation after careful investigation by the Board of Censors of the county medical society concerned and the Trustee and Councilor for the District."

The following cases have been closed during the past year:

CASES No. 194 and 195. Two defendants same case. Alleged malpractice resulting in poor result following fracture of femur. Three separate court trials; first two resulting in jury disagreement; third in verdict of nonsuit for the defendants.

CASE No. 199. Sponge in abdomen. Jury trial resulted in verdict for our member. Plaintiff moved for a new trial. At time of argument plaintiff withdrew motion for new trial, and judgment was entered on verdict in favor of the defendant.

Financial Report

GENERAL FUND

Balance on hand September 1, 1929		$20,872.26
RECEIPTS		
Membership allotments (7,862 members, inc. 93 for 1929)	$49,023.62	
Transferred from Medical Defense, Medical Benevolence, and Endowment Funds for investment	32,864.55	
Journal	13,306.14	
Annual Session	4,362.50	
Reimbursement from Medical Benevolence Fund for Vouchers Nos. 120, 190, 266	3,143.75	
Rents—Harrisburg property	1,380.00	
Reimbursement from Medical Defense Fund for Vouchers Nos. 35, 174	1,000.00	
Interest on deposits	500.92	
Miscellaneous	358.94	
Balance-money advanced Mgr.'s acct. 1929 session	241.47	
Periodic Health Exam. Blanks	12.00	
		106,193.89
		$127,066.15
DISBURSEMENTS		
Publishing Journal and official transactions	$21,178.66	
Salaries, exclusive of Editor's	14,146.84	
Annual Session	6,972.89	
Transfer of proceeds of funds	4,560.00	
Committees, exclusive of Scientific Work	2,520.48	
Officers Travel and Expense	1,169.73	
Reimbursement petty cash funds	1,134.21	
Stationery, supplies,	601.50	
230 State St.—Taxes, repairs, ins.	539.63	
Secretaries' Conference	442.50	
Councilor District meetings	402.60	
Rent	360.00	
Tri-State Conference	124.00	
Miscellaneous	129.93	
Bonding Officers	93.75	
Investments and reinvestments	63,299.06	
		117,675.78
Balance on hand, September 1, 1930		$9,390.37

GENERAL FUND—special account

Balance on hand Sept. 1, 1929	$11,950.86	
Interest to April 25, 1930	482.79	
Transferred from check account Voucher No. 214	10,000.00	
Balance on hand Sept. 1, 1930		$22,433.65

ENDOWMENT FUND

Balance on hand Sept. 1, 1929	$9,365.42	
RECEIPTS		
Interest on investments	1,715.00	
Interest on deposits	163.58	
Transferred from General Fund (net income from real estate)	416.25	
		$11,660.25
DISBURSEMENTS		
For investment		9,971.56
Balance on hand Sept. 1, 1930		$1,688.69

MEDICAL DEFENSE FUND

Balance on hand Sept. 1, 1929	$3,452.83	
RECEIPTS		
Interest on investments	1,993.75	
Interest on deposits	126.20	
From Membership Allotments	1,960.83	
		$7,533.61

DISBURSEMENTS

For investment	$3,953.52	
Transferred to General Fund in payment of Vouchers Nos. 35, 174	1,000.00	
		$4,953.52
Balance on hand Sept. 1, 1930		$2,580.09

MEDICAL BENEVOLENCE FUND

Balance on hand Sept. 1, 1929 ..... $13,832.62

RECEIPTS

Interest on investments	3,143.75	
Interest on deposits	269.45	
From membership allotments	7,844.30	
Contributions—Drs. J. M. Higgins, C. R. Farmer, F. B. Utley, a Friend; Clearfield and Lancaster County Medical Societies	3,221.35	
Woman's Auxiliary of the Medical Society of the State of Pennsylvania; Woman's Auxiliaries of following county medical societies: Allegheny, Beaver, Berks, Butler, Cambria, Chester, Clinton, Dauphin, Delaware, Erie, Fayette, Greene, Lackawanna, Lancaster, Lycoming, Lebanon, Lehigh, Mifflin, Montgomery, Northampton, Philadelphia, Potter, Washington, Westmoreland, York, ($2,946.00).		
		$28,311.47

DISBURSEMENTS

For investment	$18,939.47	
Transferred to General Fund in payment of Vouchers Nos. 120, 190, 266	3,143.75	
		$22,083.22
Balance on hand Sept. 1, 1930		$6,228.25

DISBURSEMENTS

1929—1930

Order No.		
1.	American Surety Co., Premium on bonds for Secy., Treas., Acting Treas., and Managing Editor, Vouchers Nos. 1, 159	$93.75
2.	Progressive Press, printing and supplies, Vouchers Nos. 2, 8, 21, 48, 60, 67, 69, 102, 107, 108, 119, 162, 183, 213, 241, 242	966.45
3.	Appel and Weher, gavel	23.15
4.	J. B. F. Wyant, Trustee and Councilor, exp. acct., Vouchers Nos. 4, 151, 240	144.89
5.	M. S. Blair, reimbursement for salary paid stenographer	55.95
6.	Evangelical Press, printing and supplies, Vouchers Nos. 6, 9, 29, 59, 103, 118, 124, 161, 225	903.49
7.	C. R. Phillips, Trustee and Councilor, exp. acct., Vouchers Nos. 7, 165	26.95
10.	Masonic Temple, rental 4 days, 79th annual session	700.00
11.	F. B. Blodgett, rental St. Paul's Chapter House, session	50.00
12.	Hotel Lawrence, rental and refreshments, President's Reception	355.00
13.	Kelly and Green, rental of lanterns	162.50
14.	J. J. Martin, orchestra, President's Reception	89.00
15.	Hen. Johnston, erecting scientific and commercial exhibits	1,200.00
16.	Bland and Welker, carpenters, porters, janitors, etc.	903.95
17.	Margaret Bach, exp., registration desk	16.00
18.	Frank C. Hammond, exp. account editor	100.00
19.	Walter F. Donaldson, Secretary, exp. acct., Vouchers Nos. 19, 42, 89, 101, 133, 191	277.95
20.	H. R. Trick, exp. acct., guest speaker, Sec. Councilor Dist. meeting	40.00
22.	Irene Peters, exp. Registration Desk	16.00
23.	Gen. Lewelleyn, nurse, motion picture theater	30.00
24.	Jenkins Arcade Co., rent, Vouchers Nos. 24, 36, 62, 104, 105, 132, 140, 166, 182, 211, 232, 248	360.00
25.	A. G. Trimble, buttons and badges	85.00
26.	F. G. Blake, exp. acct., guest speaker	60.69
27.	Evangelical Press, printing, publishing, mailing JOURNAL, Vouchers Nos. 27, 55, 84, 97, 123, 160, 163, 176, 193, 224, 261, 262, 263, 264	18,529.88
28.	J. H. Hess, exp. acct., guest speaker	44.15
30.	Hyacinth Beard, exp. acct., annual session	70.17
31.	Mae Andrews, exp. acct., annual session	70.57
32.	Ida L. Little, exp. acct., annual session	59.86
33.	E. L. Keyes, exp. acct. guest speaker	48.92
34.	M. E. Reik, reporting, Vouchers Nos. 34, 192	272.05
35.	C. C. Shull, attorney's fee Med. Def. case No. 187	500.00
37.	Treasurer Woman's Auxiliary, commission on sale of space	55.20
38.	M. S. Blair, salary, Vouchers Nos. 38, 63, 85	774.99
39.	Hyacinth Beard, salary, Vouchers Nos. 39, 64, 86, 111	566.64
40.	Mae Andrews, salary, Vouchers Nos. 40, 65, 87, 112, 129, 146, 168, 178, 203, 234, 244, 253	$1,466.64
41.	Frances Shields, salary, Vouchers Nos. 41, 66, 88, 113, 131, 148, 170, 180, 205, 236, 246, 255	1,140.00
43.	Anthracite Trust Co., purchase of bonds for funds, Vouchers Nos. 43, 172, 239	45,516.38
44.	C. B. Longenecker, Asst. Secy., exp. acct.	73.15
45.	R. L. Cecil, exp. acct., guest speaker	61.27
46.	Irene H. Snyder, reporting	257.74
47.	F. E. Dillan, reporting	202.85
49.	Mary S. Blair, exp. acct., Vouchers Nos. 49, 114	108.71
50.	P. C. Jeans, exp. acct., guest speaker	78.48
51.	C. P. Small, exp. acct., guest speaker	42.90
52.	L. C. Sorenson, reporting	188.57
53.	A. N. Richard, exp. acct., guest speaker	45.04
54.	Paul Correll, exp. acct., Com. Pub. Health Legis., Vouchers Nos. 54, 121, 164, 218	1,922.32
56.	Udo J. Wile, exp. acct., guest speaker	50.00
57.	H. S. Miller, reporting	114.23
58.	Edgar S. Buyers, reimbursement Exp. Sec. Counc. Dist. meeting	25.00
61.	Hotel Lawrence, exp. for guest speaker	3.00
68.	J. J. Maglauchlin, papering	5.18
70.	Walter F. Donaldson, Secretary, salary, Vouchers Nos. 70, 141, 208, 257	3,500.00
71.	John B. Lowman, Treasurer salary, Vouchers Nos. 71, 142, 209, 258	250.00
72.	R. B. Evans, salary Legal Counsel, Vouchers Nos. 72, 144, 210, 260	300.00
73.	Frank C. Hammond, Editor, salary, Vouchers Nos. 73, 143, 207, 259	2,500.00
74.	Ida L. Little, salary, Vouchers Nos. 74, 149, 173, 181, 206, 237, 247, 256	1,695.00
75.	Walter F. Donaldson, for cash payment of exp. acct. of county society secretaries at Secretaries' Conf.	427.00
76.	Lawrence Litchfield, Trustee and Councilor, exp. acct.	1.91
77.	Ross V. Patterson, President-elect, exp. acct., Vouchers Nos. 77, 134, 216	109.17
78.	Mary S. Blair, reimburse petty cash fund	190.15
79.	John V. Laver, flowers, President's Reception	10.00
80.	Bowman & Company, window shades	24.95
81.	H. W. Mitchell, Trustee and Councilor, exp. acct., Vouchers Nos. 81, 125, 187, 201	116.86
82.	F. J. Bishop, Trustee and Councilor, exp. acct., Vouchers Nos. 82, 126, 199	71.86
83.	Geo. W. Himes, repairing roof	3.90
90.	E. L. Armstrong, exp. acct., Com. on Cancer	24.50
91.	Thos. H. Weaber, exp. acct., Sci. Prog. Com.	23.80
92.	Geo. W. Grier, exp. acct., Com. on Cancer	25.00
93.	John O. Bower, exp. acct., Com. on Cancer	13.00
94.	Joseph Service Co., Ins. prem. furniture	7.32
95.	Harrisburg Club, dinners, etc. meeting, Com. on Cancer	25.20
96.	Mary A. Yerger, salary, Vouchers Nos. 96, 110, 128, 145, 167, 177, 202, 233, 243, 252	3,547.62
98.	Geo. A. Knowles, Trustee and Councilor, exp. acct., Vouchers Nos. 98, 138, 200	16.04
99.	A. J. Bruecken, exp. acct., Com. on Cancer	34.00
100.	Mary A. Yerger, advanced acct., 1930 session exp.	100.00
106.	Walter F. Donaldson, reimburse, petty cash fund, Vouchers Nos. 106, 212, 270	376.27
109.	U. S. National Bank, rent safe deposit box, Vouchers Nos. 109, 219	7.50
115.	Mary A. Yerger, exp. acct., Vouchers Nos. 115, 188, 222	65.73
116.	Jos. Tiracchia, refund on JOURNAL subscription	1.75
117.	William S. Ritch, wreath, Dr. Litchfield	25.00
120.	Edward B. Heckel, Int. on Benev. Fund, Vouchers Nos. 120, 190, 266	3,143.75
122.	Penna. Chamber of Commerce, annual dues	25.00
127.	C. C. Wolferth, exp. acct., Com. Sci. Work	13.00
130.	Ruth J. Beard, salary, Vouchers Nos. 130, 147, 169, 179, 204, 235, 245, 254	850.00
135.	H. B. Anderson, exp. acct., Com. Sci. Work	18.00
136.	J. Gibson Logue, exp. acct., Com. Sci. Work, Vouchers Nos. 136, 194	16.44
137.	N. D. Gannon, exp. acct., Com. Sci. Work, Vouchers Nos. 137, 196	90.00
139.	William T. Sharpless, exp. acct., President, Vouchers Nos. 139, 250	253.06
150.	F. M. Highberger, floor plans and JOURNAL cover design, Vouchers Nos. 150, 156	75.00
152.	T. P. Tredway, exp. acct., Com. Sci. Work	45.00
153.	O. G. A. Barker, exp. acct., Com. Sci. Work, Vouchers Nos. 153, 197	36.00
154.	H. H. Turner, exp. acct., Com. Sci. Work, Vouchers Nos. 154, 221	47.23
155.	J. T. Bretz, taxes, Vouchers Nos. 155, 223	353.43
157.	J. Allen Jackson, exp. acct., Mental Hygiene Com.	15.00
158.	Mary A. Yerger, reimbursement petty cash fund, Vouchers Nos. 158, 220, 269	567.79
171.	Tucker Anthony & Co., purchase of bonds for funds, Vouchers Nos. 171, 238	7,782.68
174.	Mark Thatcher, attorney's fee Med. Def. case No. 179	500.00
175.	A. S. Kech, exp. acct., Trustee and Councilor	30.40

Order No.		
184.	Harnics & Salisbury, work. comp. ins.	$12.00
185.	D. B. Pfeiffer, exp. acct., Com. Sci. Work	18.00
186.	Reid Nebinger, exp. acct., Com. Sci. Work	4.76
189.	Sunbury Daily, reprints	4.68
195.	C. H. Marcy, exp. acct., Com. Sci. Work	47.82
198.	H. B. Anderson, exp. acct., Com. Sci. Work	18.00
214.	Transferred to special acct. from general fund	10,000.00
215.	H. F. Oves, county taxes	59.85
217.	Ross V. Patterson, luncheon Tri-State Conf.	51.30
226.	Orange Pub. Co., primers for Woman's Aux.	69.50
227.	F. E. Weaber, painting, 230 State St.	85.00
228.	Harry M. Hall, exp. acct., guest 7th Coun. Dist. meeting	25.00
229.	Lycoming Hotel, exp. for guests 7th Coun. Dist. meeting	38.13
230.	J. F. Schamberg, exp. acct., guest 7th Coun. Dist. meeting	20.00
231.	Harvey F. Smith, for deficit, Central Penna. Cancer Clinic	221.46
249.	Walter F. Donaldson, reimbursement for telephone service July 1928 to July 1930	48.00
251.	E. S. Buyers, exp. acct., Trustee and Councilor	32.82
265.	Endowment Fund, net income real estate ..	416.25
267.	W. S. Brenholtz, Trustee and Councilor, exp. acct.	63.77
268.	A. E. Crow, Trustee and Councilor, exp. acct.	81.00
271.	Horner, Doyle, Wright, printing and postage, 3d Councilor Dist. meeting	48.52
	TOTAL	$117,675.78

District Meetings

Councilor district meetings during the year have been well planned and their programs quite evidently approved, judging from the record-breaking attendance. It is planned for 1931 to announce in February the date, place, and, as far as possible, the programs for all such meetings. The attendance and character of the programs at several other district meetings arranged by grouped component societies suggests proffers of financial aid by the State Society in the encouragement of this form of graduate instruction. There are certain hospitals throughout the State that have in recent years become veritable centers of graduate education to the members of the medical society of the county. May their number increase.

Medical Benevolence Fund

Contributions to the Medical Benevolence Fund for the year total $3,221.35, of which amount $2,946 was contributed by the various woman's auxiliaries. (See financial statement in Secretary's Report.) Reference to the report of the Benevolence Committee will show that the demands upon the Fund during the year have been increased proportionately with the encouraging increase in the principal of the Fund.

American Medical Association at Philadelphia

As the second largest component of the American Medical Association, our Society will have considerable responsibility for the success of the 1931 session of the Association, which is to be held in Philadelphia. While most of the actual work and financial obligation for the social features of the session will fall upon the Philadelphia County Medical Society and its local committee on arrangements, a record-breaking registration, with its resultant increase in interest in the scientific program and exhibits, will devolve upon our members throughout the State. It is hoped therefore that our own House of Delegates will give some thought to plans not only for an exhibit of our Society's activities, but for the entertainment of the officers and members of the House of Delegates of the American Medical Association, and for a large registration of members zealous to make welcome those of our fellow-members in the American Medical Association who will be in Philadelphia from every state and territorial possession of the Union.

In closing your Secretary gratefully acknowledges the coöperation received from the officers of this Society and its component societies, as well as from the Editor and Managing Editor of the JOURNAL.

WALTER F. DONALDSON, *Secretary.*

REPORT OF THE TREASURER

September 1, 1929 to September 1, 1930

GENERAL FUND

SPECIAL ACCOUNT

RECEIPTS		
To Cash—Balance on hand at beginning of fiscal year	$11,950.86	
Interest on deposit	482.79	
Transferred from checking account	10,000.00	
		$22,433.65
WITHDRAWALS		.....
BALANCE ON HAND, September 1, 1930		$22,433.65

CHECKING ACCOUNT

RECEIPTS		
To Cash—Balance on hand at beginning of fiscal year	$20,872.26	
Receipts during year	106,193.89	
		$127,066.15
DISBURSEMENTS		
By Cash—Paid Vouchers Nos. 1 to 271 inclusive		117,675.78
BALANCE ON HAND, September 1, 1930		$9,390.37

MEDICAL BENEVOLENCE FUND

RECEIPTS		
To Cash—Balance on hand at beginning of fiscal year	$13,832.62	
Receipts during year	14,478.85	
		$28,311.47
DISBURSEMENTS		
By Cash—Withdrawn for investment and benefits		22,083.22
BALANCE ON HAND, September 1, 1930		$6,228.25

MEDICAL DEFENSE FUND

RECEIPTS		
To Cash—Balance on hand at beginning of fiscal year	$3,452.83	
Receipts during year	4,080.78	
		$7,533.61
DISBURSEMENTS		
By Cash—Withdrawn for investment and defense		4,953.52
BALANCE ON HAND, September 1, 1930		$2,580.09

ENDOWMENT FUND

RECEIPTS		
To Cash—Balance on hand at beginning of fiscal year	$9,365.42	
Receipts during year	2,294.83	
		$11,660.25
DISBURSEMENTS		
By Cash—Withdrawn for investment		9,971.56
BALANCE ON HAND, September 1, 1930		$1,688.69

SUMMARY

TOTAL CASH BALANCES ON HAND, September 1, 1929	$59,473.99	
TOTAL RECEIPTS DURING YEAR	137,531.14	
		$197,005.13
TOTAL DISBURSEMENTS		154,684.08
TOTAL CASH BALANCES, September 1, 1930		$42,321.05

CASH BALANCES AND INVESTMENTS

September 1, 1930

CASH BALANCES

General Fund, Special Account	$22,433.65	
General Fund, Checking Account	9,390.37	
Medical Benevolence Fund	6,228.25	
Medical Defense Fund	2,580.09	
Endowment Fund	1,688.69	
TOTAL		$42,321.05

INVESTMENTS

Medical Benevolence Fund

Registered Liberty Bonds, 4th Series, 4¼%, 1933-8, Serial Nos. 198563-4-5-6-7	$5,000.00	
American Telephone and Telegraph, 5½%, 1943, Nos. 81983, 59558, 28598-9-600	5,000.00	
Illinois Central Railroad, 4¾%, 1966, Nos. 1592-3-4-28011-12	3,500.00	
Penna. Railroad Company, 5%, 1964, No. 42561	1,000.00	
Chicago, Milwaukee and St. Paul Railway, 5%, 1935, Nos. 6178-9-80	3,000.00	
Baltimore and Ohio Railroad, 5%, 2000, Nos. 27406-7-8-9-10	5,000.00	
Buffalo, Rochester and Pittsburgh, 4½%, 1957, Nos. 15588-26637	2,000.00	
Wabash Railway Company, 5%, 1976, Nos. 6852-3	2,000.00	
Canadian National Railways, 4½%, 1957, Nos. M62992-3	2,000.00	
Southern Pacific Co. Equipment Trust, 5%, 1933-5, Nos. 10028-10327-11217-12370	4,000.00	
Carolina, Clinchfield and Ohio Railway, 6%, 1952, Nos. M6035-7231-3787-6001-6002	5,000.00	
Chesapeake Corporation, 5%, 1947, Nos. 40706-7-8-9	4,000.00	
Equitable Gas and Light Co. of New York, 5%, 1932, Nos. 986-987-1458	3,000.00	
New York Central Equipment, 5%, 1934, Nos. 21414-5-6-7-21881-2-3	7,000.00	
Nos. M17334-5-6-7-8-9-17492 (due 1935)	6,000.00	
Buffalo, Rochester and Pittsburgh, 4½%, 1957, No. 14977	1,000.00	
Minnesota Power and Light, 1st and Ref., 4½%, 1978, Nos. 11566-7-8-9-70	5,000.00	
Ontario Power Co. of Niagara Falls, 5%, 1943, Nos. 05361-2-3-4-09755	5,000.00	
Western Union Telegraph Co., 5%, 1960, Nos. 9627-8-9-30-31	5,000.00	
Commonwealth Edison, 1st Mort., 4½%, 1960, Nos. TM7886-7-8-9-90	5,000.00	
Total		$78,500.00

Medical Defense Fund

Registered Liberty Bonds, 4th Series, 4¼%, 1933-38, Nos. 324243-4-5	$3,000.00	
Coupon Liberty Bonds, 4th Series, 4¼%, 1938, Nos. 1382125-1385611-12-13-14	5,000.00	
American Telephone and Telegraph, 5%, 1946, Nos. 55087-8-9-90-91-92-3-4-56792-3	10,000.00	
Illinois Central Railroad, 4¾%, 1966, No. 1595	500.00	
Penna. Railroad Company, 5%, 1964, Nos. 21470-1-2-3-48549-50	6,000.00	
Canadian National Railways, 4½%, 1957, No. M62994	1,000.00	
Chesapeake Corporation, 5%, 1947, No. 40705	1,000.00	
Equitable Gas and Light Co. of New York, 5%, 1932, No. 2585	1,000.00	
New York Central Equipment. 4½%, 1935-7, Nos. 12551-15351	2,000.00	
Lehigh Valley Railroad, 5%, 2003, Nos. 84178-9-80-81	4,000.00	
Western Pacific Railroad, 5%, 1946, Nos. 8204-5044-5045-10347-18971	5,000.00	
New York Central Equipment, 5%, 1935, No. M17492	1,000.00	
Chicago Union Station, 5%, 1944, No. 6729	1,000.00	
Buffalo, Rochester and Pittsburgh, 4½%, 1957, Nos. 16369-16370	2,000.00	
Total		$42,500.00

Endowment Fund

Registered Liberty Bonds, 1st Series, 4¼%, 1932-47, No. 1653	$5,000.00	
American Telephone and Telegraph, 5%, 1950, No. M24901	1,000.00	
Penna. Railroad Co., 5%, 1964, No. 21469	1,000.00	
Canadian National Railways, 4½%, 1957, Nos. M62995-6	2,000.00	
Equitable Gas and Light Co. of New York, 5%, 1932, No. 2586	1,000.00	
Chicago and Northwestern Railway, 4¾%, 1987, Nos. 132938-134029-137409	3,000.00	
Great Northern Railway, 4½%, 1976, Nos. 3894-5	2,000.00	
North American Edison, 5½%, 1963, Nos. 17926-7-8-9-30	5,000.00	
Humble Oil and Refining Co., 5½%, 1932, Nos. M9756-7 9464-5761 5762	$5,000.00	
Niagara Falls Power Co., 6%, 1950, Nos. M4382-7118-7465	3,000.00	
Chicago Union Station, 5%, 1944, Nos. 589-590-622, 2871-2872-4395	6,000.00	
Mobile and Ohio Railroad Co., 4½%, 1977, Nos. 3152-3-4-5	4,000.00	
Great Northern Railway Co., 4½%, 1977, Nos. 12439-40-41-42-13516	5,000.00	
Total		$43,000.00

Total Investments in Securities Held by the Treasurer	$164,000.00
Total Cash Balances and Investments	206,321.05

(In addition to the above the Society holds title to the property at 230 State Street, Harrisburg, occupied by the office of the Pennsylvania Medical Journal.)

Respectfully submitted,

J. B. Lowman, *Treasurer.*

REPORT OF THE CHAIRMAN OF THE BOARD OF TRUSTEES

To the President and House of Delegates:

At its September 30, 1929, meeting in Erie, the Board of Trustees approved the interim action taken by the Public Health Legislation Committee, the President, and the Secretary of the Society, on the following resolution previously adopted by the Hospital Association of Pennsylvania:

Whereas, The Hospital Association of Pennsylvania is finding an increasing field of usefulness in aiding and formulating policies concerning every angle of the care of the sick and prevention of disease, and

Whereas, It considers that no real progress can be made without the coöperation of the medical societies and tbe nursing association of Pennsylvania, be it

Resolved, That the presidents of the last named associations be invited by the president of the Hospital Association of Pennsylvania to appoint three members from each to act with the same number of the Hospital Association of Pennsylvania, to be called a Joint Conference Committee, to consider matters of mutual interest leading to the better care of the sick in the Commonwealth of Pennsylvania and the field at large.

The interim action approved by your Board of Trustees is epitomized in the following from the report to the Board by Secretary Donaldson regarding this meeting: "After a general discussion participated in by all present, a motion was formally adopted approving the continuation of the existing Joint Conference Committee whose executive committee is composed of representatives from the Hospital Association of Pennsylvania, the Medical Society of the State of Pennsylvania, the Homeopathic State Medical Society, and the Eclectic State Medical Society, it also being the intent of the motion that all common problems affecting the organizations represented may be discussed by the Joint Conference Committee."

Your Board approved the recommendation of its Publication Committee making the incumbent Manager of Sessions and Exhibits also Managing Editor of the Journal, and placing the tenure of appointment of associate editors on an annual basis.

Your Board reorganized October 2, 1929, in Erie, electing the undersigned chairman, and Dr. Edgar S. Buyers, clerk. Dr. George A. Knowles, of Philadelphia, was introduced as successor to Dr. Frank C. Hammond, as Councilor for the First District, and Dr. A. S. Kech, of Altoona, as successor to Dr. Howard C. Frontz, as Councilor for the Sixth District, the terms of Drs. Hammond and Frontz having expired.

Dr. Frank C. Hammond was reëlected editor of the Journal for the ensuing year, and Attorney Ralph B. Evans, of Philadelphia, was chosen Counselor for the Society for the ensuing year.

The budget submitted by the Finance Committee, with several amendments, was adopted.

The Board approved the action of its Committee composed of the Chairmen of the Publication and Executive Committees, the Editor of the JOURNAL, and the Secretary of the Society, in retaining as Managing Editor of the JOURNAL and Business Manager of the Annual Sessions and Exhibits, Mrs. Mary A. Yerger, B.S., M.A. Mrs. Yerger, who is the daughter of a physician, has been trained as a laboratory technician, and comes to our Society from the Eastman Kodak Company, at Rochester, New York, where she was editor of that organization's scientific publications.

Trustee and Councilor F. J. Bishop reported that the Wayne County Medical Society desired to become known as the Wayne-Pike County Medical Society, there being a few physicians resident in the adjoining county of Pike but no component society. Dr. Bishop having reported further that there were no existing charter restrictions and no objections encountered, the Board unanimously approved the creation of the Wayne-Pike County Medical Society as a component of the Medical Society of the State of Pennsylvania.

When the meeting of December 3 adjourned, it was to attend the luncheon and meeting of the Twenty-fourth Annual Conference of Secretaries of component societies.

At the regular meeting of the Board of Trustees on February 5, 1930, appropriate resolutions were adopted on the death of Dr. Lawrence Litchfield, who was president of our Society in 1922 and a member of the Board of Trustees since 1924. At this meeting Dr. Robert L. Anderson, of Allegheny County, was chosen by the Board to fill the vacancy caused by the death of Dr. Litchfield, until October 8, 1930, at which time the House of Delegates will elect a successor to complete the remaining two years.

Two cases were presented for the consideration of the Board sitting as the Judicial Council. In the first case a member of a component society sought approval of his seeking a patent on a surgical instrument. After a general discussion the following resolution was unanimously adopted:

WHEREAS, The constitution of the Butler County Medical Society in agreement with the Code of Ethics of the Medical Society of the State of Pennsylvania and of the American Medical Association states that "any physician who shall procure a patent for a remedy or any instrument of surgery.....shall be disqualified from becoming or remaining a member of this Society; therefore, be it

Resolved, That the Board of Trustees of the Medical Society of the State of Pennsylvania, believing that Dr. —'s case as presented is not in consonance with the established rules above referred to, is of the opinion that it cannot approve Dr. —'s proposal, and requests Councilor Wyant to so notify him.

The Board referred to the Board of Censors of the Philadelphia County Medical Society, without recommendation, the request of one of said society's members for advice regarding the seeking of a patent on a gelatin disk to control posttonsillectomy bleeding.

At this meeting Dr. W. S. Brenholtz was appointed to succeed the late Dr. Litchfield as a member of the Publication Committee.

The Board adopted a resolution endorsing the 1930 Educational Campaign of the Pennsylvania Tuberculosis Society and recommended similar endorsement by the component societies.

At the May meeting of the Board of Trustees considerable discussion was devoted to the political situation existing before the primaries, as related to existing or proposed public health legislation, with the conclusion that the Society's political activities should be confined to the return to the 1931 legislature of as many candidates as possible favorable to proper medical practice and public health legislation.

Chairman Correll of the Public Health Legislation Committee at this meeting also discussed and expressed his objection to the proposed Garnishee Bill; first, on account of lack of dignity during the conduct of its proponents' business meetings; and second, their lack of knowledge of proper methods of procuring the passage of legislation. He further stated that participation in the preparation and presentation of such a bill would definitely relate our Society to the credit plans of the various trade associations of the State. Since Dr. Correll's report included no recommendation, the Board took no action. He further reported that his Committee would take no part in the campaign for nomination of the various gubernatorial candidates, beyond mailing to each member of the Society a copy of each candidate's reply to the Committee's questionnaire.

At this meeting the Board approved a recommendation made by the Finance Committee and the Secretary, appropriating to the Benevolence and Endowment Funds a surplus accumulated in the General Fund in the last two years.

After a more than usually careful investigation of a request of a member of the Philadelphia County Medical Society for assistance from the Medical Defense Fund in a criminal suit based on charges of having produced a criminal abortion, in which a money settlement was proposed by representatives of the alleged victim, the following was adopted: "Members of the State Society, against whom, on account of their being physicians, blackmail is threatened, should be given the constitutional support of their State Society, based upon recommendation, after careful investigation, by the Board of Censors of the county medical society concerned and the Trustee and Councilor for the district." The Board further advised that this case be forced to an issue in court, that we be not satisfied to have it dropped; but prosecute the alleged blackmailers after our member has been acquitted, thus establishing the position of the organized medical profession in criminal charges brought against any one of its members in consequence of his being a physician.

Meetings of the Scientific Work Committee and the Committee on Public Relations were held on the same day and in the same place as the regular February and May meetings of the Board, affording the members of the Board opportunity to meet with these important committees.

Throughout the year the interim business of the Society has been well handled for the Board of Trustees by the following standing committees appointed by the Chairman: Executive Committee—Drs. J. B. F. Wyant, Edgar S. Buyers, Augustus S. Kech. Finance Committee—Drs. F. J. Bishop, Donald Guthrie, W. S. Brenholtz. Publication Committee—Drs. Lawrence Litchfield (deceased, succeeded by Dr. W. S. Brenholtz), J. B. F. Wyant, George A. Knowles. Benevolence Committee — Drs. H. C. Frontz, Clarence R. Phillips, Edward B. Heckel, Walter F. Donaldson.

At all regular meetings of the Board reports were received, and discussed, from the Secretary of the Society, the District Councilors, the Chairman of the Committee on Public Health Legislation, as well as from special committees.

In consideration of the annual budget of our Society your Board, while exercising great care, is desirous at all times of encouraging all forms of service that extend the usefulness of the Society to its members and the public.

HARRY W. MITCHELL, *Chairman.*

REPORT OF THE EDITOR

To the Board of Trustees:

Your editor is pleased to advise you that the Journal continues to convey monthly to each member a well worth-while publication, covering the activities of the State Society, the accomplishments of organized medicine, the physician's responsibility in all medical and allied endeavors, and a scientific treatise.

The editorials continue of a high nature; the reports of the county medical societies and the councilor districts are annually increasing in value; the officers' department keeps the membership duly informed of matters properly belonging thereto; jots and tittles fill a very important niche; the medicolegal notes are informative; the departments of hospital activities, industrial medicine, physical therapy, and public health are of distinct value; the reports of the meetings of the Tristate Medical Conference contain much of very practical value to every member; the news items are very interesting; much space has been accorded the Woman's Auxiliary; and, the tuberculosis abstracts continue to be attractive.

The associate editors have been most helpful, and the reporters of the component county medical societies continue coöperative.

The latter part of December, 1929, Mrs. Mary A. Yerger assumed her duties as business manager and managing editor. Mrs. Yerger has shown zeal in her work, and has taken hold with intense interest and eagerness, and has been a valuable acquisition. To her associates Miss Andrews and Miss Beard we are indebted.

Respectfully submitted,

Frank C. Hammond, *Editor.*

REPORT OF THE MANAGING EDITOR

To the Board of Trustees:

The editorial office of the Pennsylvania Medical Journal is not, in any sense, held in fee-simple exclusion by the editors and their associates. The Journal is a product of the Pennsylvania Medical Society. All individual medical coöperatives sharing in its production are entitled by their endeavors and interest to a comprehensive knowledge of all statistics relating thereto.

The loyal and kindly coöperation of the members of the Medical Society of the State of Pennsylvania has conspired to make the year August, 1929 to August, 1930 a period of satisfactory attainment. While we may not claim for the Pennsylvania Medical Journal superlative or unusual progress, scientifically or financially, we are pleased to note that despite general business depression, necessary changes, etc., there has been no retrogression. A brief summary of present conditions will, I think, validate this statement.

Though your managing editor assumed this position only eight months ago, with the faithful assistance of two capable assistants—Miss Andrews and Miss Beard—the high standard of the Journal has been maintained.

During the year, 1929-30, there were 144 scientific papers published in the Pennsylvania Medical Journal. Eighty-eight editorials were published, and to our credit we may state that a number of publications have requested the privilege of reproducing some of these editorials with due acknowledgment of their source.

For this period, the income from advertising has been $13,020.09; from subscriptions, $249.13; from publication of *Tuberculosis Abstracts,* $392.00; and from the sale of single copies, $36.22. The summation of these amounts to $13,697.44.

The Eightieth Annual Session, Johnstown, October 6 to 9, promises to be enthusiastically and well attended. I am gratified to announce that at this time fifty-three commercial and technical exhibitors have purchased exhibit space. Several of these exhibitors are making their initial exhibits before the State Society. Several, who have been regular exhibitors before the Society for many years, have advised that they regret their inability to arrange for an exhibit this year.

Because the State Theater, immediately adjoining the Fort Stanwix Hotel (hotel headquarters), could be secured and as it would centralize the meeting and be a more convenient place for the members of the organization, their guests, and the exhibitors, it was decided to change the headquarters from the Lee-Strauss Building to the basement and mezzanine floors of the State Theater. The exhibitors have received this announcement of change in headquarters cheerfully and have agreeably adapted themselves. It is believed that the exhibits will be particularly good this year and they are heartily commended to all who attend the session.

Through the able directing of Dr. H. B. Anderson, *chairman,* the scientific exhibits will be outstanding. Each section of the Society is sponsoring a particular exhibit. Dr. Anderson has selected all scientific exhibits with great care and attention so that they will be practical, educative, and interestingly attractive. A feature will be a motion picture theater in which films of particular interest to the medical profession will be shown. A preview of several of these films has certified that they are outstanding examples of surgical and medical photography.

The Seventy-ninth Annual Session of the Medical Society of the State of Pennsylvania, held in Erie, September 30 to October 3, 1929, resulted in a total income of $5,117.00. The expenses incurred with this Session amounted to $6,972.89.

The property of the Medical Society of the State of Pennsylvania, 230 State Street, Harrisburg, is in very good condition. Responsible tenants have continued the occupancy of the second and third floor apartments. The building has been painted during the summer.

Respectfully submitted,

Mary A. Yerger, *Managing Editor.*

REPORTS OF INDIVIDUAL COUNCILORS

DR. GEORGE A. KNOWLES, PHILADELPHIA,

COUNCILOR FOR THE FIRST DISTRICT

To the President and House of Delegates:

In presenting a report for the First Councilor District, I would submit a résumé of the activities of the Philadelphia County Medical Society, which alone constitutes the First Councilor District.

The biweekly scientific meetings were held as usual, and were very interesting as well as instructive, and, as an evidence of their appreciation by the members, were largely attended. Radio health talks and weekly popular health activities, a comparatively new feature for the education of the laity, were very successfully conducted.

The postgraduate seminars, another of the more recent activities of the Philadelphia County Medical Society, were conducted at regular intervals and were found to be a very profitable method of postgraduate instruction.

The work of the Committee on Publicity has assumed a broader scope, and the chairman, Dr. Frank F. Borzell, did yeoman service while in office. Interviews with the editors of the various Philadelphia newspapers and radio corporations were granted, and promises were made by them for great improvement along this line. This Committee has created a publicity bureau, with a salaried representative who is in daily contact with the newspapers of the city, and all news involving medical questions is referred to this bureau.

The medical defense cases were taken up by the Councilor with the Trustees of the State Society and were satisfactorily adjusted.

The term of Dr. John A. McGlinn as president of the Society terminated June 30, 1930, after a very successful administration, during which a number of innovations were introduced. The most outstanding of these is the formation of the Da Costa Foundation, the income derived from same to be used for the purpose of postgraduate teaching of physicians.

An amplifier system is to be installed in the home of the society, which will make it possible to hear the speakers in all parts of the building and thus take care of the overflow meetings.

Through the strenuous efforts of Dr. George P. Müller, the new president of the Philadelphia County Medical Society, and the unified support of the delegates from the Medical Society of the State of Pennsylvania in the A. M. A. House of Delegates in Detroit, the American Medical Association will hold its meeting in Philadelphia in 1931. The Philadelphia County Medical Society is desirous of having the full coöperation of every member of the State Society and the Woman's Auxiliary in its endeavor to make the meeting a notable event. As Philadelphia has not been so honored for over thirty years, no doubt the City of Philadelphia, as well as the Philadelphia County Medical Society, will arise to the occasion.

The Woman's Auxiliary to the Philadelphia County Medical Society, true to its reputation for accomplishing results, was very active during the year and heartily coöperated with the society.

The Philadelphia County Medical Society can be relied upon, as usual, to help in the arduous work which will fall to the lot of the Committee on Public Health Legislation of the State Society during the next session of the General Assembly of Pennsylvania.

DR. EDGAR S. BUYERS, NORRISTOWN, COUNCILOR FOR THE SECOND DISTRICT

To the President and House of Delegates:

The individual county societies, Berks, Bucks, Chester, Delaware, Montgomery, and Schuylkill, comprising the Second Councilor District, are in a most healthful condition.

The Councilor has visited each component society at least once during the year, and several of the societies more than once. On March 27, a luncheon conference was held in Norristown. The secretaries of the societies in the district and President Sharpless were invited. Every secretary was present. Plans for the Councilor meeting were discussed, also the coming primaries, and each secretary was called upon to discuss any problem he had had to face during the year. President Sharpless entered into the discussion and gave such advice and counsel as only he can give. These conferences we believe to be most helpful in bringing the secretaries together, and discussing problems that are important in carrying on a county society. The interest is manifested by all being present.

The Second District is especially fortunate in having no suits for alleged malpractice among its members during the year.

The Berks County Society continues its drive for increased membership and has succeeded admirably. With its remodeled and refurnished home it is a strong leader in medical work in the Schuylkill Valley.

The Bucks County Society, as always, held enthusiastic meetings throughout the year. This society does not have meetings during the winter months. The Councilor at the time of his visit strongly advised meetings at least monthly. We trust the Bucks County Society, while it may do as much at five meetings a year as some societies do in twelve, will endeavor to meet more often.

The Chester County Society has done probably the most outstanding work of the Second District. It has continued its survey of health conditions of the county, including tuberculosis statistics, and has been able to secure an appropriation from the county commissioners whereby a full-time physician may be employed to conduct the health activities of the county. The Chester County Society is to be commended for its excellent advances along this line. Its committee, with Dr. William Evans as Chairman, has been untiring in its efforts.

The Delaware County Society celebrated its eightieth anniversary on June 19. A banquet, followed by remarks by President Sharpless and President-elect Patterson, were features of this occasion. We note with pleasure the organization of a Woman's Auxiliary in this county.

The Montgomery County Society with the support of its splendidly active Woman's Auxiliary was active during Child Health Week in May. A public lecture was given, children of pre-school age were thoroughly examined, and a campaign of diphtheria immunization was conducted in the schools. The Montgomery County Society is honored by having a member of its Woman's Auxiliary elected President of the Woman's Auxiliary to the American Medical Association, namely, Mrs. J. N. Hunsberger.

The Schuylkill County Society has had excellent programs and good speakers. Several of the meetings have been addressed by its own members. These sessions have been well attended.

The councilor meeting held at Valley Forge, September 15, 1929, addressed by Dr. Harry Trick, past president of New York State Society, and Captain Joel T. Boone, physician to the White House, ended a profitable year for the Second District. The next councilor meeting will be held at Valley Forge, September 11, 1930, with Dr. Joseph Colt Bloodgood and Dr. John B. Deaver as the principal speakers.

Wherever the Councilor has gone or spoken, almost without exception, the same question has been asked by county groups, namely, "What is to be done with the illegal practitioners in our midst? We have been long-suffering, but we feel our patience is exhausted." This question indeed is worthy of deep consideration by our House of Delegates. Its solution should be forthcoming.

DR. FREDERICK J. BISHOP, SCRANTON, COUNCILOR FOR THE THIRD DISTRICT

To the President and House of Delegates:

All the component societies of the Third Councilor District, namely, Carbon, Lackawanna, Lehigh, Luzerne, Monroe, Northampton, Pike and Wayne, are in a very satisfactory condition. Some have increased their membership considerably; meetings are held regularly, are well attended, and their programs are of excellent character, exciting considerable discussion and interest in all the societies.

All the societies that have conducted postgraduate courses in conjunction with their regular meetings are very much pleased with the results, and indications point to a continuation of the same. All the societies have been visited during the summer by the Councilor for the District, except Carbon and Northampton.

Since my last report no new suits for alleged malpractice have been instituted, and I am glad to report that the one active suit has been settled with a verdict of nonsuit in favor of the defendant.

I deem it advisable to repeat the caution mentioned in my last report regarding the proper and frequent use of the x-ray in fracture cases, or the attachment of the signature of the proper party to the x-ray release blank. It has come to my attention that this very often is neglected. The adoption of the above precautionary measures may avoid much trouble.

The annual meeting of the Third Councilor District will be held at the Irem Temple Country Club, Dallas, early in September, instead of in August, as previously. This change of date seems advisable, since a number of members are absent during August on their vacation. I anticipate a short, intensive program, and hope to stimulate interest for the fall and winter meetings of the component societies.

The Committees on Public Health Legislation have been active, and responded promptly to all requests made by the State Society Committee. The woman's auxiliaries now organized in the various county societies are active and respond promptly and satisfactorily when requests are made of them. Several of the auxiliaries have contributed considerably to our State Society Benevolence Fund, for which we offer them our praise and thanks.

DR. DONALD GUTHRIE, SAYRE, COUNCILOR FOR THE FOURTH DISTRICT

To the President and House of Delegates:

The Fourth Councilor District meeting was held in Sayre on July 15. The meeting was well attended. There were but three members of the former Eighteenth Censorial District (Columbia, Montour, and Snyder Counties) present. Your Councilor tried to stimulate interest in these meetings among the members of the county societies in the southern part of the district, but was told frankly that the counties composing the former Eighteenth Censorial District were loath to forego their meetings in place of the annual councilor district meetings.

Unfortunately, geographically speaking, distances in the Fourth District are great. The officers for the ensuing year were chosen from the lower half of the district, and it is planned that the next meeting be held in Montour County, and that the members of the adjoining societies will assist as hosts.

The reports from the secretaries of the component societies composing the Fourth Councilor District show the societies to be in good active condition.

There has been one threatened suit for alleged malpractice from Northumberland County. Your Councilor has advised the officers of the Society as to what policy to pursue, but nothing further has been heard from the plaintiff since summons was served upon the defendant.

DR. CLARENCE R. PHILLIPS, HARRISBURG, COUNCILOR FOR THE FIFTH DISTRICT

To the President and House of Delegates:

The component societies of the Fifth Councilor District, Adams, Cumberland, Dauphin, Franklin, Fulton, Lancaster, Lebanon, and York, are in a healthful condition. They have had very interesting programs during the past year, continuing the high standards set in previous years. The Councilor has had the pleasure of attending meetings of all the societies, some of them more than once, during the year. All the societies seem awake to the political power which lies dormant in them and which, should occasion arise, can be quickly awakened.

We have in this Councilor District two medical associations, the one called the Tri-County, made up of Dauphin, Lancaster, and Lebanon counties; and the other the West Section of the Fifth Councilor District, formerly the Cumberland Valley Association, made up of Adams, Cumberland, Franklin, Fulton, and York counties. Each of these societies or associations has a long and highly interesting history, and each is loath to consent to absorption into a Councilor District meeting. In fact, the Tri-County Society so decided unanimously at its recent meeting when the subject was brought up by the Councilor. As things stand today no amalgamation will be effected in the near future. President Sharpless and the Councilor attended the West Section's meeting at Piney Mountain Inn, on July 17, 1930.

The Woman's Auxiliaries to Dauphin, Franklin, Lancaster, Lebanon, and York Counties are all reported as functioning splendidly. Their meetings are well attended and marked with keen interest. Regular programs of an educational character are prepared and followed, and in addition definite welfare work is carried on. Plans for accumulating funds for worthy objects draw the members closely together in a common cause, and the direct result of these contacts and mutual interests is a splendid good-fellowship. All have contributed to the medical benevolence fund of our State Society, and all are planning to send delegates to our meeting at Johnstown.

DR. AUGUSTUS S. KECH, ALTOONA, COUNCILOR FOR THE SIXTH DISTRICT

To the President and House of Delegates:

Every county society in the district, namely, Blair, Centre, Clearfield, Huntingdon, Juniata, Mifflin, and Perry, has been visited by the Councilor, in the past year, during one of their regular scientific meetings. Five of the societies regularly enjoy excellent scientific programs, while two, Juniata and Perry Societies, with small memberships and few meetings, are greatly in need of coöperation and stimulation from their more fortunate and larger neighboring societies.

During the summer months, inter-county society meetings and hospital staff programs, in association with the regular county society meetings, have been numerous and helpful. Three inter-county meetings and five hospital programs, in conjunction with the regular meetings, have been very fruitful in stimulating interest among the hospital staff members and among the coun-

ty members. These hospital programs have been a source of inspiration to the staff and have been largely attended by physicians from all over the district.

The hospitals participating in these programs were Altoona General, Blair County Hospital for Nervous Diseases, Clearfield Memorial, Lewistown General, and Mercy Hospital of Altoona.

The largest meeting of the year in the district was the regular meeting of the Sixth Councilor District at Huntingdon, held in conjunction with the regular meeting of the Pennsylvania Roentgenological Society, on May 14 and 15, 1930. The first day was devoted to the more specific scientific and business program of the latter society, and the second day to the combined meeting of the X-ray Society with our District members. Over 200 physicians were registered on May 15. The action of the State Roentgenological Society in thus arranging to combine their annual meeting with one of the Councilor Districts appeals to me as a commendable idea, to save duplication of meetings and diversion of interest from our State Society. I strongly recommend this plan to the other Councilor Districts.

The program, May 15, included addresses by Chevalier Jackson, M.D., President William T. Sharpless, Elmer L. Eggleston, M.D., Battle Creek, Michigan, and Harry E. Mock, M.D., Chicago, Illinois.

The county societies comprising this district have felt a keen responsibility in coöperating with the Cambria County Society to make this year's attendance at the annual meeting of the State Society enjoyable for the visiting members from other districts to the city of coal, steel, energy, and hospitality.

DR. WALTER S. BRENHOLTZ, WILLIAMSPORT, COUNCILOR FOR THE SEVENTH DISTRICT

To the President and House of Delegates:

The annual report of the work and various activities of the county societies of Clinton, Elk, Lycoming, Potter, Tioga, and Union, comprising the Seventh Councilor District, is hereby submitted for your consideration.

All the societies of the district were visited during the year and in most of them considerable interest was being manifested. There are very few nonmembers in the district. Two of the societies have fewer members than formerly, because of the fact that there are fewer physicians in the two counties. A combined meeting of the societies of Potter and Tioga Counties was held at Gaines, July 8, which was very well attended. Wives and children of members were present also, a total of 72. The woman's auxiliaries of the two counties held their meetings at the same time. The attendance of the Clinton and Elk County Societies at the time of my visitation was very good. The programs at all meetings, which it was my privilege to attend, were excellent in character and very instructive.

The Potter and Tioga County Societies have decided to hold combined meetings quarterly at one central place, the members of the two societies to alternate in providing the programs, the meetings to be held at 3.30 p. m., and to be followed by dinner. The Union County Society holds quarterly meetings. The Elk and Lycoming Societies hold monthly meetings. The attendance at the meetings of these two societies has increased very much during the past year.

The annual meeting of the Seventh Councilor District was held at the Park Hotel, Williamsport, Friday, June 13, with 145 in attendance. Physicians were present from 17 counties of the State. An excellent scientific program was given by Drs. Crile, Schamberg, and Hall. We were not honored by the presence of either the president, president-elect, or secretary, for which we were very sorry.

Woman's auxiliaries are now organized in Clinton, Lycoming, Potter, and Tioga Counties. These auxiliaries are, we believe, a great asset to the county, State, and national organizations. Five auxiliary members of this district attended the annual meeting of the Woman's Auxiliary to the American Medical Association at Detroit.

The one most outstanding activity in the Seventh Councilor District is the determination of the Public Relations Committee of the Lycoming County Medical Society to work for a contagious hospital for Williamsport and Lycoming County, the same to be a unit of the Williamsport Hospital. The committee will not abate its activities along this line until its expectation has been realized.

Another project of the Lycoming County Society completed during the year is the permanent meeting quarters of the society in the Williamsport Hospital, provided and furnished at a cost of $2800. This unit, which is called Medical Hall, consists of an auditorium, a library room, a social or directors' room, also cloakrooms and toilet facilities.

No applications for medical defense have been received during the year, in fact there have been no suits for alleged malpractice in this district during the past ten years.

To all officers and members of the county societies composing the Seventh Councilor District, who aided in any way during the past year in improving county society conditions and the achievement of higher standards of medical organization in Pennsylvania, my appreciation and thanks are hereby extended.

DR. HARRY W. MITCHELL, WARREN, COUNCILOR FOR THE EIGHTH DISTRICT

To the President and House of Delegates:

The regular society activities have been continued through the year in Crawford, Erie, Mercer, McKean, and Warren Counties of the Eighth Councilor District. Numerous clinics and special meetings have been held in the district with good attendance; Erie County with its large membership and better facilities leading in this respect. The ratio of membership to eligible physicians is high throughout the district.

No malpractice suits have been tried during the year and none of any importance have been threatened.

The response to requests of the Committee on Public Health Legislation by the various societies has been praiseworthy in its general promptness and efficiency. Such action throughout the State cannot fail to favorably affect legislation tending to promote the public interests in all health matters. I desire to express my personal appreciation to each society for the help generously given in this important field of medical interest in the past and to solicit a continued activity in the future.

DR. JAY B. F. WYANT, KITTANNING, COUNCILOR FOR THE NINTH DISTRICT

To the President and House of Delegates:

I submit my fifteenth annual report as Councilor for the Ninth District of the Medical Society of the State of Pennsylvania. This is my farewell, but not however

with the same feeling as the old minister who was delivering his farewell sermon to his congregation, and said, "Brethren, I have three reasons for leaving you: first, you do not love me, for you do not pay me my salary; second, you do not love each other, for none of you get married; third, the Lord does not love you for he does not take any of you home." I want to express my appreciation for the kindly treatment accorded by the Board of Trustees, for the splendid coöperation of the societies comprising the Ninth District, Armstrong, Butler, Clarion, Indiana, Jefferson, and Venango, for the pleasant greetings from the members throughout the State at our annual meetings, and for the distinction of having been permitted to serve so long as Trustee and Councilor for the Ninth District.

It has been a great pleasure to see our State Society progress with the general trend of advancement during my fifteen years of service on the Board. Then we had about 6500 members and about $17,000 in the treasury; today we have almost 8000 members, a valuable property in Harrisburg, a substantial Medical Defense Fund, a serviceable Medical Benevolence Fund, and a wholesome Endowment Fund.

The societies of the Ninth District are active, and meet at regular intervals. Many valuable papers have been read by the members, and good speakers from other places have done much to keep up the interest during the past year.

The Armstrong County Medical Society has a membership of 47, two having withdrawn, robbing her of 100 per cent county membership, which she has had since 1911. There are five unlicensed chiropractors in the county, and one licensed osteopath. Ten meetings were held during the year, one at Freeport, one at Leechburg, one at Apollo, and the other meetings at Kittanning.

The Butler County Society has 54 members. There are 18 nonmember physicians in the county, two licensed and one unlicensed chiropractors, and two licensed osteopaths.

The Clarion County Society reports 25 members, four nonmembers, and five licensed osteopaths. Four meetings were held during the year.

The Indiana County Society, 57 active members, one affiliate and eight nonmembers, two unlicensed chiropractors and three licensed osteopaths. Meetings have been held monthly, besides three tri-county meetings with the Clearfield and Jefferson County Societies.

The Jefferson County Society, 47 members, two nonmembers, three chiropractors, and two osteopaths. Monthly meetings are held, and they join with their neighbors in a tri-county meeting.

The Venango County Society, 51 members, 12 nonmembers, three licensed and five unlicensed chiropractors. Venango and Mercer County Medical Societies recently held a joint meeting in Stoneboro (Mercer Co.) with an attendance of about 90. The President of the State Society, Dr. William T. Sharpless, and the Councilor for the Ninth District were the speakers. The Band from the State Institution at Polk furnished the music, and it was a real treat to hear the guests of the home render such fine music.

There is a marked growing good fellowship among the members of the societies of the district, and when they unite in a joint meeting, it is like a family reunion. This was very apparent at our 1930 Councilor District meeting in June, at the Kittanning Country Club.

The legislative committees of the societies of the district coöperated with the Committee on Public Health Legislation of the State Society to the best of their ability.

There is peace throughout the district, [illegible] suits for alleged malpractice are pending.

I am pleased to turn these societies over to my successor, expressing the hope that he will be supported and encouraged in the work as I have been.

DR. ROBERT L. ANDERSON, PITTSBURGH, COUNCILOR FOR THE TENTH DISTRICT

To the President and House of Delegates:

During the past year the State Society, the Tenth Councilor District, and the Allegheny County Medical Society lost two outstanding physicians.

On January 15, Dr. Lawrence Litchfield, a former president of the Medical Society of the State of Pennsylvania, died at his home in Philadelphia. Dr. Litchfield, shortly following his graduation in 1888 from Bellevue Hospital Medical College, located in Pittsburgh and rapidly became a national figure in internal medicine. After forty years of active practice, Dr. Litchfield, on account of failing health, removed to Philadelphia. A few nights before his departure from Pittsburgh, he was honored by a testimonial dinner, at which national figures in medicine and in medical organization, as well as devoted friends, were present. Dr. Litchfield's life was characterized by his indomitable zeal and his intensity of purpose. These qualities made invaluable his services to this Society.

James I. Johnston died during his term as president of the Allegheny County Medical Society. Dr. Johnston was a regular and devoted attendant at all meetings of the scientific assembly of the State Society, and always was generous with his time and energy in behalf of organized medicine. "He lived his life of unblemished personal and professional reputation among us—an excellent gentleman and fine physician."

The annual meeting of the Tenth Councilor District was held in Pittsburgh under the auspices of the Allegheny County Medical Society. Invitations were extended to all members of record of the Tenth District. This meeting was well attended by representatives of the four component societies. In the enforced absence of Dr. Litchfield, former Councilor, the late Dr. James I. Johnston, presided. The program was presented by the Ophthalmological, Dermatological, Neurological, and Urological Societies of Pittsburgh, and was enthusiastically received.

The annual banquet and meeting of the Lawrence County Medical Society occurred on June 13, with a very satisfactory and representative attendance. Dr. Joseph C. Bloodgood, of Baltimore, Md., discussed many interesting phases of the cancer problem, illustrated with slides.

The annual meeting of Beaver County Medical Society was entirely social and was thoroughly enjoyed by the many members present.

Westmoreland County Society did not have its customary outstanding clinic this spring, and the absence was noted by many members of the district. It is hoped that our associates in the original western county will see fit to carry on with this always interesting and exceptionally well attended feature of their program.

On the occasion of the recent state primaries, it became necessary for two of our county societies in particular to engage in active politics. The efforts of Westmoreland and Allegheny County Societies were satisfactorily successful, and they are to be congratulated for their zeal and energy, and for the results obtained.

DR. ARTHUR E. CROW, UNIONTOWN, COUNCILOR FOR THE ELEVENTH DISTRICT

To the President and House of Delegates:

It is with a great deal of satisfaction and pride that I submit to you the activities of the various counties within my District, namely, Bedford, Cambria, Fayette, Greene, Somerset, and Washington. I feel that the standard of our State Society is entirely, or at least to a very great degree, dependent upon the efforts of our component societies, and I am happy to say that, though we have three rather small counties within our district, these counties have awakened to the fact that they are links in the chain which represents an organization in our profession that stands second to none in this country. Recognizing this fact, they are making a strong endeavor to shoulder the obligation as they now see and feel it.

It has been my pleasure to visit the six counties of my district. One or two of these societies have had their difficulties in the past as any county with a small registration of physicians may have, but I feel that these difficulties have been overcome, and that the societies are wide awake at this moment, constantly striving to do their part. In Cambria, Fayette, and Washington Counties, we have societies representing a large number of physicians, and, inasmuch as numbers mean strength, I am safe in saying that these three counties with their numerous activities represent three strong links in the chain of our State organization.

In June of this year our Councilor District meeting was held in Johnstown, and I believe we had the largest attendance I have ever seen at a Councilor meeting (148), but with a county society like Cambria in charge, and speakers such as Crile of Cleveland, and Petty of Philadelphia, what else could you expect?

I wish, personally and officially, to thank the members of the Eleventh District for the very efficient part they have played in making it possible for me to report so favorably on their past year's activities.

REPORTS OF STANDING COMMITTEES

COMMITTEE ON PUBLIC HEALTH LEGISLATION

To the President and House of Delegates:

The Committee on Public Health Legislation begs to present for your consideration and deliberation a résumé of a portion of their activities continued from the previous year, as well as new activities instituted in the year just closed.

The Joint Conference Committee, organized in 1928, incorporating representatives of our Society, the Homeopathic, and the Eclectic Societies, as well as the Hospital Association of the State, has continued in conference the study of various phases which relate to the enactment of laws concerning hospitalization and the practice of medicine. Out of the workings of this Joint Conference Committee has come a subcommittee, of which three of the five members are members of our Society, who are at this time studying the Medical Practice Act of our State, as well as all types of similar Acts in other states.

It is apparent that under the present law, with its enabling sections, enforcement which will rid the state of hundreds of illegal practitioners cannot be undertaken.

Under the present Medical Practice Act there appears to be insufficient police power, independent of politics, etc., to permit the exact enforcement of the law as now written, and which, even when enforced, lacks power to deter certain violators of the law from again returning to their nefarious practice.

It is apparent that considerable adjustment of the present act should be undertaken so as to modernize and harmonize medical education, licensure, and enforcement. It is apparent that the three features mentioned are not in strict accord with the best thought of the day.

The Committee begs to report, as it has often stated heretofore, the decline of cult teaching under nomenclature such as was used in the past. We desire, however, to warn against the introduction of new cultism, adorned in new clothes, to carry on their usual work. Your Committee, expecting the usual cult legislation in the forthcoming Legislature in 1931, promises the same will be cared for in a proper manner.

The importance of component societies presenting keymen to the District Councilors for legislative activities this coming winter, who will add to the efficiency of our organization, cannot be emphasized too greatly. The Committee desires to keep its personnel of keymen at the highest point of efficiency, so that the present working organization may be augmented wherever it seems advisable. Your Committee on Public Health Legislation begs to suggest that it is not essential that keymen be members of the component societies' committees on public health legislation.

The committee on public health legislation of each county should be carefully investigated as to their activity in the past. Where the personnel is inactive, disinterested, or not enthusiastic, they should be replaced by others willing and capable of carrying on the work expected of them. Too many committees on public health legislation throughout the State have existed without alteration for many years past, and their records are marked by masterly inactivity in many instances.

Contact with Representatives and Senators has been entirely turned over by your committee to the members of our Society in the respective legislative districts until the opening of the 1931 Legislature. Each candidate for office, and those Senators whose terms do not expire, have been asked to communicate with their home doctors on public health questions. This request by your State Committee has brought forth an enthusiastic response from practically all legislators, and an agreement that they would not make any promises, but would consult the members of our profession in all matters of this character.

The representatives of organized medicine have been treated with the utmost courtesy by the representatives of all State governmental departments. Every consideration has been given to our requests, which, from time to time, have been made upon them.

The outlined plans for the ensuing year, already completed, make it apparent that our State Society and other medical interests of the State will go before the legislative bodies with a constructive program, seeking legislation which will modernize, clarify, and permit Pennsylvania's Act to function in ways which it now appears to lack because of fundamental deficiencies. The accomplishment of this will require an even more splendid effort than was expended in 1929. We will need a unified profession, coöperating with a constructive leadership, at Harrisburg during the 1931 legislative term. It is hoped that the plan which will finally be adopted by your Committee will not only be approved,

but will have the unstinted support of the individual physicians in every community. The Chairman of this Committee acknowledges with gratitude the advice and coöperation received from the members of the Board of Trustees, individually, throughout the year, as well as during conferences with the Board at its interim meetings.

In conclusion, may we ask for our successors a continuance through another year of the loyalty and support which your present Committee has been accorded. No other organization, whether it be business or professional has maintained a more loyal attitude toward proper ideals in the health interests of the people of our State than has the organization we have had the pleasure of serving during the year just passed.

Paul R. Correll, *Chairman,*
William T. Sharpless,
Walter F. Donaldson,
George L. Laverty,
Lewis Edwards,
Edgar S. Buyers,
I. Dana Kahle.

COMMITTEE ON PUBLIC RELATIONS

To the President and House of Delegates:

The nine named members of the Committee on Public Relations of the Medical Society of the State of Pennsylvania feel that in order for the Committee to accomplish the objects of its existence, it is essential that every member of the Society consider himself or herself an active and vitally interested member thereof. We feel it cannot be too definitely stated, nor too strongly stressed, that character in a physician is now, as it always has been, more important than the mere possession of medical knowledge and technical skill; further, that at its best the profession of medicine is a highly personal relationship between physician and patient, and that anything — even scientific procedure — which deprives a patient of a sense of intimacy with his physician, is a detriment to both.

It is felt that one of the greatest and most insidious dangers that threatens to undermine the confidence of patients in their physicians is the hurried office consultation, and that ideally office hours should be by appointment, except in emergencies. There should be an acknowledgment by both physician and patient that it is necessary to devote time and thought to the most important problem of existence, namely, the preservation of life and health.

During the past year your Committee recommended and adopted the following measures: First, revision of the periodic health examination blank issued by the State Society; Second, stimulation of the activities of the component societies in behalf of county medical society representation on the controlling boards of the various lay and welfare health agencies, in the various counties, which in any way deal with medical or sickness problems; Third, revival of interest of the members of the component societies in toxin antitoxin immunization against diphtheria, featuring especially the children of pre-school age; Fourth, enrollment before the meeting of the 1930 House of Delegates of the influence of the component societies in behalf of the proposed establishment of two new psychopathic hospitals in the eastern and the western ends of the State.

This Committee in the future hopes to take an active interest in mental hygiene and the legislation relating thereto, and to further additional housing for the mentally afflicted. It is also felt that this Committee, rather than the Scientific Work Committee, should investigate the mortality rate of appendicitis in this State, with a view to ascertaining the delay in operation, the use of laxatives prior to operation, the number of cases of perforation, peritonitis, and death.

The Committee condemns the endorsement by physicians of purely commercial and nontherapeutic agents, and it recommends to the House of Delegates consideration of a revision in the published code of ethics to cover this recommendation.

This Committee further feels that too many men in our profession are doing surgery without sufficient training and skill, which leaves a bad impression on the public mind, and this particularly relates to "tonsil surgery." There are too many "casual surgeons." The physician is to blame for the state, municipalities, and various organizations taking from his practice the immunization for diphtheria, typhoid fever, etc. If he would preach his own doctrines to his clientele, there would be no need for other agencies performing these duties.

It is observed that there is much unrest and dissatisfaction in the minds of many intelligent citizens regarding the very casual attitude of a certain number of our profession regarding their duties, their "job," so to speak. We cannot instil confidence into the public unless we take our work seriously. Unless the physician, whether general practitioner or specialist, arouses and gives serious thought and consideration to his patient and his illness, there is danger to his reputation and art. If he does neglect his duty, by his own fault, these evils will lead to state medicine; and if this system works in our State as it does in England, it will be a sorry state of affairs, with the doctor only to blame.

The coming year should see much activity for the Committee on Public Relations, and after a meeting of the full membership this fall, its activities will be more than noticeable.

Edward J. G. Beardsley, *Chairman,*
Norbert D. Gannon, *Secretary,*
William J. Armstrong,
Charles Falkowsky, Jr.,
Ralph Hill,
Wilmer Krusen,
Curtis C. Mechling,
John M. Quigley,
Alexander H. Stewart.

COMMITTEE ON MEDICAL BENEVOLENCE

To the President and House of Delegates:

The Committee on Medical Benevolence began the Society year 1929-1930 with five beneficiaries. There were five approved during the year and two discontinued, leaving eight approved beneficiaries at the present time. It may be gratifying to know that in each of three instances the remittance from the Fund is assisting in maintaining in their own homes three young children of deceased or disabled members of our Society.

The Woman's Auxiliaries of the component county societies have again made liberal contributions to the Medical Benevolence Fund, as have a number of county societies and individual members. The Benevolence Committee is most grateful for this help. There is still need for increasing this Fund, as the demands for assistance are becoming greater each year. It is necessary to give larger remittances in some instances where the need is urgent and the distress particularly appeal-

ing. The Committee is grateful also to the unnamed members who, at their request, in some instances confer with beneficiaries regarding judicious distribution of the funds received, also to members who have brought to the attention of the Committee cases worthy of assistance.

The report of the Treasurer of the Committee is as follows:

Balance on hand August 31, 1929		$1,496.60
Receipts		
From Treasurer Lowman Feb. 11, 1930	$1,233.75	
From Treasurer Lowman May 26, 1930	844.36	
From Treasurer Lowman Aug. 25, 1930	1,065.64	
Interest on deposits	1.04	3,144.79
		$4,641.39
Disbursements		
September 1, 1929	$105.00	
November 1, 1929	710.00	
February 1, 1930	780.00	
May 1, 1930	735.00	
August 1, 1930	885.00	$3,215.00
Balance on hand August 31, 1930		$1,426.39

HOWARD C. FRONTZ, *Chairman,*
EDWARD B. HECKEL, *Treasurer,*
WALTER F. DONALDSON,
CLARENCE R. PHILLIPS.

COMMITTEE ON NECROLOGY

To the President and House of Delegates:

The Committee on Necrology has communicated with all the county societies in the State, and has received replies from thirty-five secretaries. We find that the county societies have been very attentive to the duty of paying a last tribute to their departed colleagues. This has been particularly marked in the rural counties. Several counties have an annual religious service in memory of the physicians, both members and nonmembers, who have passed away, and it would seem that the publicity incident to such a meeting would greatly aid in keeping a high standard before the medical men themselves and also produce a very good impression on the laymen of the community. The reporting of deaths to the State Society seems to be prompt and accurate.

GEORGE C. YEAGER, *Chairman,*
WALTER F. DONALDSON,
EDGAR M. GREEN,
C. IRVIN STITELER,
CHARLES E. TAYLOR.

REPORTS OF SPECIAL COMMITTEES

COMMITTEE ON MENTAL HYGIENE

To the President and House of Delegates:

The Committee on Mental Hygiene during the past year has concentrated its efforts on the promotion of mental hygiene day observances throughout the component medical societies and the woman's auxiliaries; on the preparation of editorials on mental hygiene appearing in the JOURNAL monthly through the courtesy of the Editor; and on arranging programs and providing speakers for Mental Hygiene Day meetings for medical groups and lay audiences.

The effectiveness of the Committee's work has been due greatly to the increase in membership of the Committee, and to the division of the State into three zones: central, eastern, and western sections, the three members appointed by the President serving as Chairmen of their respective sections, with the Chairman appointed by the President acting as Chairman of the groups as a whole. Great credit must also be given to the individual members of the committee, to the component county societies who have in a large proportion coöperated with the committee, and especially to the superintendents of the mental hospitals, schools, and other institutions throughout the State where many of the mental hygiene meetings were held, also to the Woman's Auxiliary, the Bureau of Mental Health of the Department of Welfare, and the Mental Hygiene Committee of the Public Charities Association.

Your Committee has recommended to the Committee on Public Health Legislation that it lend its efforts to the creation, through legislative appropriations, of two psychiatric hospitals, one to be located in the eastern and the other in the western section of the State, not at the expense, however, of maintenance and building programs of our State institutions.

Your committee further recommended to the Public Health Legislation Committee that it lend its efforts, through legislative appropriations, to the maintenance and construction program of the Department of Welfare during the incoming Legislative Session, as well as to the sponsoring of such legislation for the betterment of mental health, the prevention of mental diseases, the creation of vocational classes in our public schools, ways and means for neuropsychiatric examination of children in the public school system, and for the betterment of the care of the mentally ill.

Your Committee recommends that the Mental Hygiene Day observances be continued and observed by the component county societies during the ensuing year; mental health should also be stressed at our councilor meetings; symposia should be arranged for the programs of the various scientific sections; and in addition one paper should be presented before the general session at the next annual meeting dealing with a mental health subject of primary importance to the general practitioner.

In conclusion, your Committee believes that organized medicine as represented by the Medical Society of the State of Pennsylvania should assume leadership in mental hygiene matters in the State, and to this end it should lend its efforts to promoting future training in neuropsychiatry of the students in our medical schools; to promoting suitable places for intern training in psychiatry; and to sponsoring the movement of utilizing the many vacant beds in our general hospitals for such purposes, as well as for research, study, and care of certain types of the mentally ill, all of which will lend to the training of men to carry on such leadership.

J. ALLEN JACKSON, *Chairman,*
CORNELIUS C. WHOLEY,
LEROY M. A. MAEDER.

COMMITTEE ON LAY EDUCATION

To the President and House of Delegates:

No business has been referred to our Committee since the last report. A survey of the field since the 1929 session of our State Society has shown that much of the work planned for our Committee is being well done by the State Department of Health, its carefully prepared articles on preventive medicine for individuals and communities having entrée into the columns of the very best newspapers in all parts of the State.

If this committee is to be continued, a full-time field secretary employed by our Society might well take over the activities for which it was created, and working in

conjunction with the Committee on Public Relations, carry on the work in a more thorough and up-to-date way than the two committees can, working as separate units.

THOMAS G. SIMONTON, *Chairman,*
WALTER F. DONALDSON,
ELLIOTT B. EDIE,
FRANK C. HAMMOND,
CHARLES H. MINER,
GEORGE W. SMELTZ.

COMMISSION ON CANCER

To the President and House of Delegates:

This has been one of the most active years in the history of the Cancer Commission. The Commission, with all members present, met shortly after its appointment and outlined work for the year. Among numerous activities discussed, the following accomplished are the most important:

1. County society meetings. Many of the counties throughout the State have held one or more cancer meetings. York County held an especially valuable public meeting, Dr. J. C. Bloodgood, of Baltimore, being one of the speakers. A meeting for the Seventh Councilor District held at Williamsport covered that area. The Philadelphia County Medical Society provided a fine meeting at which Dr. Ewing, of New York, and Dr. Jones, of Boston, spoke. Other societies holding or planning to hold cancer meetings are Elk, Northampton, Indiana, Erie, Dauphin, and Allegheny.

2. Instruction of nurses. As in previous years, members of the Commission have requested each general hospital in its district to provide special lectures on cancer to graduating nurses as a public health matter.

3. The third annual cancer course was in many respects the most valuable and successful yet held. It was held in Harrisburg, under the auspices of the Dauphin County Medical Society. There were 185 registrations. This number was augmented at the dinner meeting by about 50 men and women especially invited to hear Dr. Bigelow, of Boston, discuss cancer as a public health problem. Dr. Bloodgood and Dr. Geschicter, of Baltimore, also took a prominent part in this course. The program as published in the May number of the JOURNAL was followed in detail. The subjects were all treated from the standpoint of prevention and early recognition. The Cancer Commission deeply appreciated the splendid response of the guest speakers at this notable meeting.

4. Cancer records. During the year the Commission prepared what it believes to be a valuable form for recording necessary data in the intensive study of cancer patients. It is gratifying to note that the first printing of these blanks is nearly exhausted. A new printing is to be made and the blanks may be purchased at cost at the business office of the State Society in Harrisburg.

5. The Commission has continued its efforts toward the establishment of tumor clinics in all general hospitals in the State, as it is felt that this is an essential and very much needed forward step to assure better service to the cancer sufferer. The Commission regrets to report that its efforts in this connection have met with little success. So far as is known, two hospitals, Presbyterian and St. Francis, both of Pittsburgh, are the only ones which have formed such special clinics. It is understood that both of these clinics are functioning to the great satisfaction of the trustees and the medical staffs, and the Commission wishes to congratulate these two hospitals on taking this advance step for the benefit of one of its most deserving classes of patients.

6. As for the future, the Commission still hopes that the State of Pennsylvania will soon establish a Cancer Institute. Preparations are under way now for a cancer exhibit in the display which our State Society will make at the Philadelphia meeting of the American Medical Association in 1931.

The Commission feels that its work should be continued and will request an appropriation of $1000 for the coming year.

JONATHAN M. WAINWRIGHT, *Chairman,*
ERNEST L. ARMSTRONG,
ALBERT J. BRUECKEN,
JOHN O. BOWER,
GEORGE W. GRIER,
ALBERT F. HARDT,
HARVEY F. SMITH.

COMMITTEE ON ARCHIVES

To the President and House of Delegates:

Since the last report the Committee has received, and acknowledges with thanks, a copy of the Souvenir Program and History of the Washington County Medical Society, which has been filed with the archives of the Society. This history was prepared in celebration of the Seventy-fifth Anniversary of the Washington County Society.

WALTER F. DONALDSON, *Chairman,*
SAMUEL G. LOGAN,
JEFFERSON H. WILSON.

COMMISSION TO CONFER WITH THE VARIOUS PRIVATE AND GOVERNMENTAL HEALTH AGENCIES

To the President and House of Delegates:

The Committee to Confer with the Various Private and Governmental Health Agencies began the year's work without instructions as to any particular work to be carried out, and they had no unfinished problems to be continued from the committee of previous years. The annual reports of this Committee for the past few years do not indicate that this Committee has been especially active, and probably has very little excuse for being continued.

The Chairman of the Committee has selected certain Governmental and other Health Agencies, with which he considered it desirable for the Medical Society of the State of Pennsylvania to make contact, and has assigned these various organizations to individual members of the Committee, suggesting that they work out a plan by which the State Society and these various organizations could coöperate. Some of the organizations selected did not show any very great desire to coöperate, and some members of the Committee were unable to carry out the work assigned to them, however, a start has been made with some organizations, and it will, no doubt, be profitable for the succeeding Committee to continue the work which has been started.

To Dr. W. G. Turnbull were assigned the National Organization of Public Health Nursing, the Public Charities Association of Pennsylvania, American Association of Hospital Social Workers, Child Health Association, National Hospital Association, Pennsylvania State Tuberculosis Association, and National Tuberculosis Association. Unfortunately, Dr. Turnbull's various duties were such as to prevent him from making

contact with these various health agencies. Many of these organizations would, no doubt, coöperate with the State Medical Society, if given an opportunity to do so, and it would be profitable to all concerned.

To Dr. Charles B. Forcey was assigned the matter of Public Health Work with the Chamber of Commerce. This work has been begun by the members of the Allegheny County Medical Society with the Pittsburgh Chamber of Commerce. The results of this work in Allegheny County have been so satisfactory that it was thought advisable to extend the work throughout the State. Unfortunately, Dr. Forcey was unable, because of illness, to carry out this work, and the Chairman of the Committee was not notified until too late to assign it to any of the other members of the Committee.

To Dr. U. Grant Gifford were assigned the U. S. Navy, U. S. Army, U. S. Public Health Service, American Red Cross, and the U. S. Veterans' Bureau. There being no special reason for contact at this time with the Army and Navy, no attempt was made to get in touch with the medical service of either of these organizations. Contact was made with the U. S. Public Health Service without developing any problems of importance. The U. S. Veterans' Bureau fully appreciates the desirability of maintaining coöperative relations with local county and state medical societies, and urges the officers in charge of the Bureau's medical activities in the field to exert every influence towards this end. They are very willing to appoint a committee to meet with the officers of the State Medical Society and to work out definite plans by which the two organizations can coöperate to an even greater extent than at present. The American Red Cross also express a desire to coöperate, and have expressed their appreciation of the services rendered by the various members of the medical profession in times of disaster. This work of Dr. Gifford's has only begun and should be continued by this Committee in the future.

To Dr. Joseph J. Meyer was assigned the Graduate Nurses' Association, and his report is as follows:

"An investigation of the relations between the physicians and nurses of Pennsylvania, particularly in relation to the Graduate Nurses' Association, discloses a vast difference of opinions between the physicians and the nurses with regard to the present-day training of graduate nurses. The effort to secure the views of the leaders in these two professions met with very little success and there is an apparent indifference to any idea of coöperation.

"The Graduate Nurses' Association of Pennsylvania feels that there is a need for a broader education of nurses and that the present requirements are inadequate. Physicians, on the other hand, feel that the course of instruction for young women to qualify as graduate nurses are unduly long and laborious. They have courses in bacteriology, chemistry, physiology, anatomy, etc., in some cases almost equivalent to that of the first or second year medical student.

"There is a wide difference of opinion with regard to the amount of training and education necessary for the present-day graduate nurse. Here are two professions, closely allied, with separate state governing boards, working independently of each other, without any thought of coöperation and coördination.

"This question alone is important enough for a detailed investigation, and the recommendation is made that arrangements should be made for a committee representing the medical profession, and made up of members of the society qualified to deal with this subject, to meet with the leaders of the nursing profession and try to arrive at an amicable solution of the present difficulties."

Contact with the Pennsylvania State Dental Society was made by the Chairman of this Committee, who was invited to speak before this Society at their meeting in Pittsburgh. They are very anxious to coöperate with the State Medical Society, not only with the scientific discussion of subjects in which the work of the two professions overlap, but also with our Legislative Committee. The State Dental Society have appointed a standing committee to confer with the Medical Society of the State of Pennsylvania, consisting of Dr. Walter E. Lotz, Tyrone; Dr. George S. Schlegel, 147 N. 8th St., Reading; Dr. Alfred P. Lee, 235 S. 15th St., Philadelphia; Dr. M. B. Marshall, Empire Building, Philadelphia; and Dr. H. E. Friesel, chairman, dean of dental school, University of Pittsburgh, Pittsburgh.

The Committee requests that in the event the various county medical societies desire to invite members of the dental profession to discuss scientific subjects before the local societies, they should communicate with a member of the above committee, who will select speakers to discuss such scientific subjects as may be desired.

A closer coöperation between the members of the two societies should result in a far more satisfactory understanding than we have at the present time. This Committee should also render valuable service in coöperation with our Committee on Public Health Legislation. The problems of the dental profession, as well as the medical, are very much the same as far as legislative matters are concerned, and the two committees working together would bring about better results than could be obtained by the two professions working separately.

I. HOPE ALEXANDER, *Chairman,*
CHARLES B. FORCEY,
U. GRANT GIFFORD,
JOSEPH J. MEYER,
WILLIAM G. TURNBULL.

CONFERENCE COMMITTEE WITH PENNSYLVANIA PHARMACEUTICAL ASSOCIATION

To the President and House of Delegates:

Your Committee to confer with the Pennsylvania Pharmaceutical Association begs to submit the following:

With your indulgence we will present part of the 1929 report simply to refresh your memories.

"Again, as in last year's report, we would suggest a closer relationship between medicine and pharmacy, for the interests of both professions are largely identical.

"We would advocate joint meetings of the two professions in each county of the State, where mutual problems may be freely and frankly discussed, and the respective legislative programs of both societies be outlined.

"We believe that the matter of a closer relationship between the two professions should be referred to the Committee on Public Relations, and they be requested to formulate some working basis on which to build a permanent liaison between the two professions, which must always be closely identified in the prescribing and preparation of drugs necessary to the practice of medicine."

These resolutions, though favorably reported on by the Public Relations Committee, bore little fruit. We

believe four counties held joint meetings with the Pharmaceutical Society during the past year.

We do not know whether this Society really approves of your committee's suggestions, but we are offering the following resolution for your consideration and action:

(We may not be authorized, but we nevertheless feel justified in including the dental profession in the resolution.)

Resolved, That the incoming President of the Medical Society of the State of Pennsylvania be instructed to appoint a committee of three to confer with similar committees of the Pharmaceutical Society and the Pennsylvania Dental Society, with the object of bringing about joint action in behalf of legislation that will adequately safeguard the health of the citizens of Pennsylvania; and be it further

Resolved, That copies of this resolution be forwarded to each of the above mentioned state organizations, with the suggestion that similar committees be appointed, who will join in this movement to eliminate those uneducated and unlicensed practitioners of medicine, pharmacy, and dentistry, who now jeopardize the public health in this State.

J. Newton Hunsberger, *Chairman,*
Samuel D. Shull.

COMMITTEE ON DEFENSE OF MEDICAL RESEARCH

(Subsidiary to the Committee on Health Legislation)

To the President and House of Delegates:

As no business was referred to the Committee on Defense of Medical Research, no meeting of the Committee was held during the current year.

James D. Heard, *Chairman,*
Seth A. Brumm.

REPORTS OF DELEGATES TO OTHER SOCIETIES

REPORT OF DELEGATES TO THE 1930 SESSION OF THE AMERICAN MEDICAL ASSOCIATION

To the President and House of Delegates:

The Medical Society of the State of Pennsylvania was represented in the Eighty-first Annual Session of the American Medical Association, held at Detroit, Michigan, June 23 to 27, by its complete delegation, comprising the following duly elected delegates and alternates: Dr. John A. Campbell, Williamsport; Dr. Walter F. Donaldson, Pittsburgh; Dr. Howard C. Frontz, Huntingdon; Dr. J. Newton Hunsberger, Norristown; Dr. J. Norman Henry, Philadelphia; Dr. Frank P. Lytle, Birdsboro; Dr. Arthur C. Morgan, Philadelphia; and Dr. William H. Mayer, Pittsburgh. Dr. John B. McAlister, Harrisburg, and Dr. Orlando H. Petty, Philadelphia, were unable to serve on account of illness; and Dr. Samuel P. Mengel, Wilkes-Barre, was absent in Europe. Dr. David W. Thomas, Lock Haven, Dr. George W. Reese, Shamokin, and Dr. Earl R. Whipple, Steelton, served as alternates in their place. The delegation selected Dr. Donaldson as their chairman.

The following members of our delegation were appointed and served on Reference Committees of the House: Dr. Campbell on the Reference Committee on Miscellaneous Business; Dr. Henry on the Reference Committee on Reports of Board of Trustees and Secretary; Dr. Hunsberger on the Reference Committee on Legislation and Public Relations; and Dr. Donaldson on the Reference Committee on Medical Education.

Two hundred ninety-two members of our Society registered at the headquarters, the total registration being 5,104. Sixty-five of our members were scheduled to present papers or to open discussions in the fifteen sections of the scientific assembly. Our Society was also well represented among the exhibitors and demonstrators in the 113 scientific exhibits.

A delightful feature of the opening general session pleasingly reminiscent to our delegation, was the presentation to former presidents of the association of a medal commemorative of their respective terms of service.

Much of the time of the House was occupied in listening to and in discussing addresses and reports from the President, the President-elect, and the Secretary of the Association, devoted largely to the economics of medical practice.

Reports of Officers

President Harris referred to the proposed establishment in European countries of universal medical service by the government. He discussed the present National Health Insurance Act in effect in England and the proposal of the British Medical Association to provide a nation-wide medical service.

President-elect Morgan discussed the relation of the physician to the hospital, and laid down certain principles: (1) The physician is no more obligated to provide for the care of the indigent sick than his fellow citizen; and (2) in mutual charitable undertakings for the care of the sick, each citizen contributes what he has; the laymen, physical necessities; the physician, professional skill. But each has a right to protect himself from exploitation and to judge of the merit of the recipients of his bounty.

Secretary West devoted a large part of his report to a discussion of the need of the development of a more militant spirit in county medical societies and in state medical associations to the end that each of these units of medical organization, in its sphere, will become more efficient in advancing the science of medicine, in improving the means and methods of its application, in bettering the public health and in persistently opposing anything and everything that would reduce the medical profession to the status of a trade or of a socialized group of hirelings.

The Reference Committee in its approval of the report of Secretary West, included the following: "We endorse the sentiment expressed in the report of our secretary in which he recommends a more active and aggressive program on the part of component medical societies, stressing the necessity for unified action on the part of the medical profession as being essential in maintaining leadership in all questions pertaining to health matters. We recognize the changing method in medical practice; however, we earnestly urge a realization of the necessity of maintaining the personal relationship between physician and patient, and oppose well meaning but misinformed and misguided individuals or organizations in their efforts to apply "mass production" methods to the practice of medicine. We believe that it would be a decided aid to organized medicine if the members of the House of Delegates would

avail themselves of the opportunity of attending the annual conference of the state secretaries."

Bureaus, Councils, and Commissions

Recently created or recommended Councils of the American Medical Association are as follows: Council on Medical Economics and Committee on Foods.

Reports from various Bureaus and Commissions of the Association disclosed many activities constantly alert to protect the health interests of the public, notably, *the Bureau of Health and Public Instruction.* More than 4000 inquiries concerning one therapeutic product were received by the Bureau during the year, a fact which shows the increasing interest of the public in matters pertaining to health and the constantly growing use of the services of the Bureau. During the year more than 155,000 copies of pamphlets and posters of the Bureau were distributed. The Association, through the Bureau of Health and Public Instruction, has continued its coöperation with the National Educational Association, the National Congress of Parents and Teachers and other important bodies.

The work of the *Bureau of Investigation* was far heavier in 1929 than in any previous year of its existence. More than 10,000 individual inquiries of a general nature were received and answered, of which 6350 came from laymen and 4078 from physicians. Better Business Bureaus and governmental agencies are availing themselves of the services of the Bureau of Investigation to a much greater extent than heretofore. The fullest possible coöperation has been given to official governmental bodies in Washington and elsewhere in the efforts of these agencies to protect the public against imposition by the promoters of nostrums and appliances of various kinds for which undue claims of therapeutic efficiency have been made.

It was brought out in the *report of the Board of Trustees* that expenditures of the Councils, Bureaus, and other departments of the Association were in excess of $280,000 in 1929, this having been in addition to miscellaneous charges due to costs of publication of the special journals and of the Directory, to incidental expenses involved in the conduct of the Association's business and, of course, in addition to the expense arising from the publication of THE JOURNAL.

The *report of the Judicial Council* concluded with these words: "When medical service is made impersonal, when the humanities of medicine are removed, when the coldness and automaticity of the machine are substituted for the humane interest inherent in individual service and the professional and scientific independence of the individual physician, the greatest incentive to scientific improvement will be destroyed and the public will be poorly served."

Proposed Paternalistic Legislation

The House of Delegates adopted a telling resolution presented by the Board of Trustees against perpetuation by the federal government of the defunct Sheppard-Towner Maternity and Infancy Act. The Reference Committee, which recommended approval of the resolution, made notation as follows: The resolution shows evidence of most thorough study and careful preparation. The Committee feels that its adoption by the House of Delegates should be of great assistance to the profession throughout the United States in its campaign of educating the public to the menacing effect of paternalism, so perfectly exemplified in the so-called Sheppard-Towner Act and similar forms of legislation.

The House of Delegates also adopted resolutions introduced by the Board of Trustees critical of the federal agencies which continuously react to political pressure by extending free hospitalization facilities to war veterans, rich or poor, and without regard to when the ailment complained of developed, or its relation to war service. Suggestive of graver communistic possibilities is the latest legislative proposal "to allow such veterans, as are of financially limited means, bonuses and money to add to their own comforts while they are in the hospital and to help support their families during that period and for limited periods thereafter. Certainly such influences are "calculated to induce patients to seek hospital care through the Veterans' Bureau when such patients should be better and more economically treated as ambulant patients or treated in their own homes."

The Board of Trustees and the House of Delegates of the American Medical Association evidently thoroughly believe that it is the duty of the more than 90,000 members of the American Medical Association to educate, each his own clientele, regarding the following fundamental principle of states rights: That the duty of providing medical and hospital care and financial relief for indigent citizens of any state, when disabled by diseases and injuries that did not originate in the line of military duty, is a function not of the federal government, but of the governments of the several states and should be discharged through state agencies, including permanently established state, county, municipal, and private hospitals.

Philadelphia in 1931

Dr. J. Norman Henry extended an invitation to the Association to hold its 1931 session in Philadelphia. An invitation was also extended to meet in Atlantic City. The vote of the delegates present favored Philadelphia.

There seems to be little doubt that the Woman's Auxiliary to our State Society, by reason of the thoroughness of its organization and the number present, as well as by ability and energy manifested, dominated the 1930 session of the Woman's Auxiliary to the American Medical Association. This of course means that much will be expected of our Auxiliary at the 1931 Session of the American Medical Association.

We should begin now to concentrate on a determination to break all records for registration and its resultant increase in interest in the scientific program and its exhibits. This year the registration of members of the Michigan State Medical Society was 1627, or 46 per cent of their total membership. A similar proportion of registrants from the Medical Society of the State of Pennsylvania would be 3680. If Philadelphia County will register 1800 of its 2200 members, the rest of our component societies should be able to bring the total to well above 3000 from Pennsylvania, and a grand total registration of more than 8000 from the entire Association.

WALTER F. DONALDSON.

REPORT OF DELEGATE TO THE 1930 SESSION OF THE PENNSYLVANIA PHARMACEUTICAL ASSOCIATION

To the President and House of Delegates:

Herewith is presented a report of my attendance upon the annual meeting of the Pennsylvania Pharma-

ceutical Association, at Buena Vista, June 17. When called upon, I extended greetings from our Society and referred to the bonds common to the professions of medicine and pharmacy, as well as the important contribution of pharmacy to the practice of preventive medicine. I also spoke of the good feeling which I believe exists between the members of our organization and the pharmacists' organization, and our wish to encourage a continuance of same. I also emphasized the importance of the two professions working together in their efforts to maintain high licensing standards in all branches of the healing art in Pennsylvania, and in better enforcement of the present laws regulating such practice.

Samuel D. Shull.

Officers' Department

WALTER F. DONALDSON, M.D.
Secretary
8104 Jenkins Arcade Bldg.,
Pittsburgh, Pa.

ANNUAL REPORTS

In the Official Transactions published in this issue of the Journal, will be found a score or more of reports from officers, delegates, and committees of our State Society. They comprise statistics, financial statements, investigations, relationships, criticisms, suggestions, and recommendations. They are in the main addressed to the President and the House of Delegates, but they are published three weeks in advance of the annual meeting in order that each of our nearly 8000 members may have opportunity to read them and discuss them with their delegates to the Johnstown session. We believe problems are touched upon in these reports that vitally involve the membership of each county society in the State. We hope they will be widely read and trust for reactions during the sessions of the House of Delegates that will indicate a wide-awake interest among many members in the interim transactions of our Society, and in the economic questions now confronting medical practitioners throughout the country.

THE NEW HEALTH EXAMINATION BLANK

With this copy of the Journal each member of our Society receives a copy of the new Periodic Health Examination Blank very recently approved and issued by the Committee on Public Relations of the Medical Society of the State of Pennsylvania. It will be noted that the blanks may be purchased by any one interested at $1.00 per hundred.

The blank as it appears today is developed from a similar blank originated by the American Medical Association in 1923, modified by our Society in 1925, later modified by a life insurance company and again by the health committee of the Chamber of Commerce of a large city. In its present form—a four-page leaflet—it undoubtedly appeals to lay people, and will be very helpful to the examining physician.

Twenty-five thousand copies of the blank issued in 1925 have been sold, and we believe that a package of the 1930 blanks with a "Help Yourself" card attached should be on the reception room table of every practicing member of our Society. The physician who does not make health examinations can advise inquirers to take the partially completed blank to their personal or family physician.

The Public Relations Committee sincerely hope that similar committees of the component societies will take an interest in a wide distribution of the new blanks, and also endeavor to arouse the members of their societies to a sense of their responsibility for the furtherance of the type of preventive medicine related to periodic physical examinations.

CONTRIBUTION TO MEDICAL BENEVOLENCE FUND

The Committee on Medical Benevolence gratefully acknowledge receipt of the following contributions to the Medical Benevolence Fund:

A Friend (Allegheny County)	$5.00
Woman's Auxiliary to Allegheny County Medical Society	259.00
Woman's Auxiliary to Cambria County Medical Society	100.00
Woman's Auxiliary to Clinton County Medical Society	10.00
Woman's Auxiliary to Erie County Medical Society	71.00
Woman's Auxiliary to Washington County Medical Society	30.00
Woman's Auxiliary to York County Medical Society	50.00

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to August 15:

Allegheny: *Reinstated Member*—Charles A. Arnold, 156 McClure Ave., N. S. Pittsburgh.

Beaver: *Reinstated Member*—Joseph J. Scroggs, Beaver. *Removal*—Stanton S. Hoechstetter from New Brighton to Hancock St., Bedford, Mass.

Bedford: *New Member*—Alvin Z. Stoner, Bedford Valley.

Butler: *Reinstated Member*—Joseph J. Schultis, 127 S. Main St., Butler.

CHESTER: *Death*—Henry E. Porter, Coatesville (Hahnemann Med. Coll. '02), June 18, aged 57.

CLEARFIELD: *New Member*—Harry A. Vosburg, Jr., Deposit Bank Bldg., Dubois. *Death*—Lever F. Stewart, Clearfield (Univ. of Pa. '10), July 22, aged 43.

LACKAWANNA: *Reinstated Members*—Bernard A. Maffucci, 39 N. Church St., Carbondale; Thomas B. Rodham, 1820 N. Main Ave., Scranton.

NORTHAMPTON: *Removal*—Charles Kutner, from Easton to 919 S. Fifth St., Camden, N. J.

PHILADELPHIA: *New Members*—Wilbur E. Burnett, 3701 N. Broad St.; Eugene T. Foy, 4701 Cedar Ave.; George G. Given, 3428 N. Seventeenth St.; William J. Walsh, Jr., 2614 Edgemont St., Philadelphia. *Reinstated Member*—Albert C. Menger, 935 N. 29th St., Philadelphia. *Removal*—Thomas H. Miller, from Philadelphia to 1510 Easton Blvd., Detroit, Mich.; J. Claxton Gittings, from Philadelphia to Harwood, Anne Arundel Co., Md.; Paul R. Stalnaker, Capt. M. C. U. S. N., from Great Lakes, Ill., to Naval Hospital, Washington, D. C. *Deaths*—Christian B. Longenecker (Bellevue Hos. Med. Coll. '92), July 22, aged 74; Hiram Loux (Jeff. Med. Coll. '82), recently, aged 71; Henry G. Bruner (Jeff. Med. Coll. '84), recently, aged 73.

SCHUYLKILL: *Death*—James C. Gray, Cressona (Jeff. Med. Coll. '84), July 3, aged 70.

SOMERSET: *Reinstated Member*—Ralph E. Conn, Confluence.

VENANGO: *Reinstated Members*—Henry B. Gaynor, Polk; Peter Emery Huth, Franklin.

WESTMORELAND: *Reinstated Member*—W. T. O'Hara, New Kensington. *Deaths*—John Lewis Burkholder, Mt. Pleasant (Jeff. Med. Coll. '05), recently, aged 48; Charles H. Smith, Arnold (Univ. of Pgh. '09), recently, aged 47.

YORK: *Death*—John R. Brodbeck, Codorus (Univ. of Md. '79), July 23, aged 74.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since July 16. Figures in first column indicate county society numbers; second column, State Society numbers:

1930				
July 16	Luzerne	297-298	7753-7754	$15.00
17	Lackawanna	233	7755	7.50
	Center	21	7756	7.50
18	Venango	52	7757	7.50
22	Westmoreland	172	7758	7.50
23	Venango*	57	7839	5.00
25	Butler	55	7759	7.50
21	Venango	53	7760	7.50
	Lackawanna	234	7761	7.50
Aug. 3	Bedford	18	7762	7.50
	Allegheny	1308	7763	7.50
	Beaver	93	7764	7.50

* 1928 dues.

County Society Reports

CLARION—JULY

A regular meeting was held on July 22, at the home of Society Treasurer and Mrs. Charles C. Ross, a most pleasant interlude in the usual routine being the delightful and elaborate luncheon served to the members by Mrs. Ross, this being the second occasion the physicians have enjoyed the abundant hospitality of their hosts. Following the customary business routine, newly elected President Vierling, of Knox, gave a most interesting and instructive address on medical conditions as he had found them while a medical missionary in China. Dr. I. Dana Kahle, of Knox, member of the State Legislature, led the discussion concerning the inroads attempted by the various pseudo-scientific cults in their efforts to encroach on legitimate medical territory. Plans for the annual picnic at Knox, in September, were discussed. Dr. Erickson, practicing at Sligo since the death of Dr. John B. Miller, was elected as a new member of the Society. The meeting closed with a tour of inspection of the magnificent new $100,000 community house about to be presented to Clarion borough by Dr. Ross and his brother, John Ross, as a memorial to their mother and to be known as the Mary A. Ross Memorial Library.

HILTON A. WICK, M.D., *Reporter.*

LEHIGH—JULY

The regular monthly meeting was held at the Elks' Home, July 8, 1930, at 8.30 p. m. Dr. Frederick J. Bishop, of Scranton, councilor for the third district of the Medical Society of the State of Pennsylvania, and Dr. M. M. Rosenberg, secretary of the Lackawanna County Medical Society, were visitors.

The following delegates to the State Medical Meeting were elected: Dr. Thomas Weaber, alternates, Drs. John Noble and Frederick Bausch; Dr. Ralph Merkle, alternates, Drs. Mark Baush and W. J. Fetherolf.

The regular monthly meeting for August will again be dispensed with this year in favor of the yearly clam bake to be held August 11.

Dr. Joseph D. Aronson, member of the staff of the Henry Phipps Institute, Philadelphia, presented a most interesting paper on "The Present Status of Immunization Against Tuberculosis with BCG (Bacillus Calmette-Guérin)."

Author's abstract of the paper: Calmette believes that resistance to tuberculosis may be induced by impregnating the lymphatic system with a living strain of tubercle bacillus that is incapable of producing progressive tuberculosis in animals. This strain, designated as BCG, or the Bacillus of Calmette and Guérin, was isolated from a cow in 1908 and has since been grown continuously on media containing beef bile. After 13 years' cultivation on this media the culture became avirulent. The majority of investigators are in accord with Calmette as to the avirulence of the BCG strain but several investigators have noted the occurrence of generalized tuberculosis in an occasional guinea pig injected with the BCG strain.

By January, 1930, 210,000 babies had been vaccinated with the BCG in France alone.

The vaccine is administered by mouth in three doses of 10 mg. each at intervals of 48 hours. Vaccination must be completed by the time the baby has reached the age of 10 days, since Calmette believes that the permeability of the intestinal mucosa is decreased after that age.

Calmette states that the mortality from tuberculosis in infants vaccinated with BCG has dropped from 15.9 per cent to 3.4 per cent. Kereszturi and Park found in New York City that among the vaccinated infants the mortality from tuberculosis fell from 8.6 per cent to 1.1 per cent. Iakhnis found that, in Ukrania, the mortality from tuberculosis in the first year of life dropped from 16 per cent in the unvaccinated infants to 2.4 per cent in the vaccinated infants. Cantacuzene and his coworkers found that in Roumania the mortality from tuberculosis in the first year of life was 25 per cent among the unvaccinated and 2.3 per cent among the vaccinated infants.

Twenty-two babies have been vaccinated at the Henry Phipps Institute since December, 1927. Of these two

died of bronchopneumonia. One infant was autopsied and no gross lesions of tuberculosis were detected. Of the 22 vaccinated babies, 17 were tested intracutaneously with tuberculin; 14, or 82.3 per cent, reacted positively, and 3 gave a negative reaction. Debre and Cofino found that 83.4 per cent of a series of 132 vaccinated infants reacted to the intracutaneous injection of tuberculin.

J. Roland Heller, M.D., *Reporter.*

WEST SECTION OF THE FIFTH COUNCILOR DISTRICT

The 24th annual meeting of the West Section of the fifth Councilor District of the Medical Society of the State of Pennsylvania was held July 17, at Piney Mountain Inn, Adams County, Pa. The meeting was called to order at 11.30 a. m. by the president, Dr. F. G. Wright, of Chambersburg.

Dr. Wright gave a brief talk, urging all members to coöperate with each other and with the State officers to improve legislative affairs and also the standing of the profession.

Brief talks were made by the president of the State Medical Society, Dr. William T. Sharpless, also State Councilor, Dr. Clarence R. Phillips, and censors of the various counties, Drs. L. S. Weaver, P. A. Noll, H. C. McClain, J. M. Dickson, and Richard Spahr.

The following officers were elected for the ensuing year: president, Dr. E. A. Miller, Adams Co.; first vice-president, Dr. H. C. McClain, Fulton Co.; second vice-president, Dr. Richard Spahr, Cumberland Co.; third vice-president, Dr. S. D. Shull, Franklin Co.; fourth vice-president, Dr. Harry Gettier, Adams Co.; fifth vice-president, Dr. C. W. Eisenhower, York Co.; secretary, Dr. W. Newton Long, York Co.; treasurer, Dr. Gibson Smith, York Co.

Dr. Harold L. Foss, surgeon-in-chief at the Geisinger Memorial Hospital, Danville, Pa., delivered an address on "The Surgical Treatment of Hypertrophy of the Prostate Gland," which was illustrated with a number of lantern slides.

Following the scientific part of the meeting, dinner was served to 85 doctors and members of their families.

W. Newton Long, M.D., *Reporter.*

Medical News

Deaths

Mrs. Knadler, wife of Dr. George W. Knadler, of Philadelphia; July 19.

Mrs. Olivia W. Bush, wife of Dr. Irvine R. Bush, of Bristol; aged 68; July 28.

Mrs. Cordelia Holloway, wife of Dr. Thomas B. Holloway, of Philadelphia; July 25.

Palmer M. Kern, M.D., of Bath; Jefferson Medical College, 1876; aged 78; May 18.

Mrs. Blanche S. Katzenstein, wife of Dr. George P. Katzenstein, of Philadelphia; July 20.

Mrs. Susanna B. Michener Jopson, wife of Dr. John H. Jopson, of Philadelphia; August 8.

Howard J. Evans, M.D., of Sunbury; Hahnemann Medical College, 1896; aged 71; August 13.

Samuel H. Simon, M.D., of Harrisburg; Hahnemann Medical College, 1880; aged 90; August 4.

John R. Brodbeck, M.D., of Codorus; University of Maryland School of Medicine, 1879; aged 74; July 23.

Thomas F. Hogue, M.D., of Fredonia; Homeopathic Hospital College of Cleveland, 1891; aged 67; June 27.

Frederick M. Strouse, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1885; aged 66; August 4.

Henrietta M. Dougherty-Trexler, M.D., of Philadelphia; Woman's Medical College, Philadelphia, 1890, aged 64; July 24.

Z. M. Kempton Fulton, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1893; aged 61; August 8.

Uriah O. Heilman, M.D., of Leechburg; College of Physicians and Surgeons, Baltimore, 1881; aged 76; March 17, of pneumonia.

Frederick F. Price, M.D., of Carbondale; Jefferson Medical College, 1891; aged 68; August 5, while aboard a steamship at Quebec, Canada.

Charles H. Smith, M.D., of Arnold; University of Pittsburgh School of Medicine, 1909; aged 47; June 26, of acute dilatation of the heart.

John Lewis Burkholder, M.D., of Mount Pleasant; Jefferson Medical College, 1905; aged 48; was killed, in July, in an airplane accident.

Conrad S. Reber, M.D., of West Reading; Jefferson Medical College, 1903; aged 54; July 31, from injuries received when he was thrown from his automobile, enroute to Virginia on a vacation trip.

Lydia Woerner, M.D., of Florida (formerly of Pennsylvania); Woman's Medical College, Philadelphia, where a $5000 medical scholarship has been established in her honor; July 3. Dr. Woerner was the first medical missionary in the Rajahmundry field (1899).

Anna S. Kugler, M.D., of Guntur, India (formerly of Pennsylvania); Woman's Medical College, Philadelphia, where a $5000 medical scholarship has been established in her honor; aged 64; July 26. Dr. Kugler entered the medical mission field in 1883, and erected one of the finest hospitals in South India. As a reward for her work the British Colonial Government bestowed upon her the famous Kaisar-I-Hind medal.

Emil Jungmann, M.D., Ph.G., of Philadelphia; Medico-Chirurgical College, Philadelphia, 1899, and Philadelphia College of Pharmacy, 1880; aged 71; July 31. Dr. Jungmann conducted a pharmacy during the last forty years, in addition to his medical practice. He was the father of Dr. John D. Jungmann, former health commissioner of Columbus, Ga., and a brother of Dr. Julius Jungmann of New York.

James E. Wyant, M.D., of Philadelphia; College of Physicians and Surgeons, Baltimore, 1914; aged 44; August 5. Dr. Wyant was resident surgeon at the Shriners' Hospital for Crippled Children at the time of his death, also on the orthopedic departments of the Orthopedic Hospital and Graduate Hospital of the University of Pennsylvania. He held the rank of major in the American Red Cross during the World War.

James Charles Gray, M.D., of Cressona; Jefferson Medical College, 1884; aged 70; July 3, of heart disease, while attending a patient in his office. For forty-two years he served on the school board of Cressona. During the last thirty-five years he was president of the Board of Education, and personally supervised the erection of a new high school in Cressona in 1928. Dr. Gray served for a time as deputy coroner. He was one of the oldest members of the Schuylkill County Medical Society, and was a private in the Civil War.

Christian B. Longenecker, M.D., of Philadelphia; Bellevue Hospital Medical College, 1892; aged 74;

suddenly July 22 at Bedford Springs, while on a motor trip. Dr. Longenecker was the fiftieth president of the Philadelphia County Medical Society, and for many years served as editor of this county society's official publication, *The Weekly Roster and Medical Digest*. He was also past president of the West Philadelphia Medical Association. Dr. Longenecker was very well known to our membership and for many years he served as assistant secretary to our State Medical Society. The body was buried at Lancaster.

LEVER F. STEWART, M.D., F.A.C.S., of Clearfield; University of Pennsylvania School of Medicine, 1910; aged 43; July 22, at the Jewish Hospital, Philadelphia, from acute dilatation of the stomach following an operation for gall-bladder disease. He was an intern at what was then the German Hospital, Philadelphia, and following this service he was associated on the laboratory staff of the Pennsylvania Hospital at Philadelphia. Upon completion of his Philadelphia activities, he returned to Clearfield and became associated with his father, the late Dr. Samuel C. Stewart. At the beginning of the World War, Dr. Stewart's services were accepted by the American Ambulance Hospital, France. When the United States entered the conflict, Dr. Stewart returned to this country, joined the U.S.A.M.C., and was sent to Fort Oglethorpe for training. He saw overseas service at a base hospital, later being assigned to field and evacuation hospitals, and for a time was attached to a regiment at the front.

Upon discharge from military service, Dr. Stewart returned to his home town and was appointed on the surgical staff of the Clearfield Hospital. In 1924 he resigned and organized the Stewart Clinic, which he conducted as a private hospital until 1928. Since 1917, he was chief surgeon of the Pennsylvania Bituminous Mutual Insurance Co. He was active in the various medical societies of which he was a member, and was a contributor to the medical literature. For several years Dr. Stewart rendered very efficient service to organized medicine, as chairman of the Commission on Compensation Laws of the State Medical Society, and during the trying time when the Workman's Compensation Act was in its developmental period.

Births

TO DR. AND MRS. CHEVALIER L. JACKSON, JR., of Philadelphia, a daughter.

TO DR. AND MRS. RICHARD F. GERLACH, of Philadelphia, a daughter, Sarah Lane Gerlach, July 13.

TO DR. AND MRS. JOSEPH T. BEARDWOOD, JR., of Melrose Park, a daughter, Deborah Beardwood, July.

TO DR. AND MRS. WILLIAM W. VAN DOLSEN, of Philadelphia, a daughter, Margaret Ferguson Van Dolsen, July 24.

Marriage

MISS VIRGINIA A. ROWE to Mr. Donald P. Spiller, son of Dr. and Mrs. William G. Spiller, all of Philadelphia, September 9.

Miscellaneous

DR. L. R. ALTEMUS, of Johnstown, has completed two weeks at the Mayo Clinic doing postgraduate work in surgery.

DR. AND MRS. ROSS HALL SKILLERN, of Ardmore, have sailed for Europe, to be gone until the middle of September.

DR. ORLANDO H. PETTY, personal physician of Mayor Mackey of Philadelphia, sailed with the Mayor for Europe, to tour France, Germany, and England.

SUITS WERE ENTERED August 7 at Pottsville against a number of persons who were patients at State hospitals in Schuylkill County and failed to pay their bills.

THE WILLS EYE HOSPITAL of Philadelphia has been sold for $1,100,000. In 1929, there were treated 24,039 patients. The new location of the hospital has not yet been decided on.

WE HAVE BEEN ADVISED that there are several attractive locations for practice in Gettysburg and surrounding country. Any one interested may communicate with Dr. John Dickson, Gettysburg, Pa., or Dr. A. C. Morgan, 1930 Chestnut Street, Philadelphia.

CHARGED BY MOTOR VEHICLE INSPECTOR WYCKOFF, with allowing his daughter Ruth, aged 12, to operate his car without a license, Dr. George A. Soden, Newark, N. J., was fined $50 and costs, July 19, by Justice of the Peace Rice. The daughter also was fined $50 and costs.

DRS. FRANK COOPER, of Pittsburgh, and Richard B. Coombs, of Minersville, interns at the Hahnemann Hospital of Philadelphia, sustained serious injuries in an automobile accident, August 4, and were admitted to the Anna Mae Memorial Hospital, Spring Lake, N. J.

THE NEW BABCOCK WARDS of the Temple University Hospital were dedicated on August 14. Dr. W. Wayne Babcock, for whom the new wards have been named, together with members of the medical faculty of Temple University, attended the ceremonies.

THE NATIONAL SAFETY COUNCIL, 20 North Wacker Drive, Chicago, will send to any camp director on request a set of five posters in two colors pertaining to safety in camping. The posters deal with poison ivy, forest fires, canoeing, hitch hiking, and the care of small wounds.

DR. ROSCOE W. TEAHAN, medical director of Jeanes Hospital, Philadelphia, has announced the appointment of Miss Elsa E. Marsh, of Cambridge, Mass., to the post of laboratory technician. Miss Marsh has had experience along this line at both the Children's Hospital and Evans Memorial Hospital, Boston.

A PARTY OF EUROPEAN PHYSICIANS, consisting of seventeen men and five women, on August 19 inspected the City of Philadelphia as a part of a nation-wide tour they are making. They visited the clinic of Dr. Chevalier Jackson, at Temple University Hospital, and also the University Hospital.

IT HAS BEEN ANNOUNCED that Dr. William J. Mayo, chief of staff of the Mayo Clinic at Rochester, Minn., will deliver the dedicatory address at the opening of the new Temple University School of Medicine, Broad and Ontario Streets, in October. Many other noted surgeons and physicians also will take part in the ceremonies.

ACCORDING TO MAJOR GENERAL MERRITTE W. IRELAND, Medical Corps, U. S. Army, the *Index Catalogue of the Surgeon General's Library* will be continued. Ninety per cent of institutions and organizations have expressed an earnest desire for a continuation of it. A new series will be started after the completion of the present series.

AMONG THE PASSENGERS sailing for Europe are the following Philadelphia physicians and their families: Dr. and Mrs. M. A. Burns, Dr. and Mrs. John A. McKenna, Dr. and Mrs. Frank S. Bowman, Dr. Charles Schabinger, Dr. and Mrs. H. T. Kelly, Dr. F. C. Knowles, Dr. and Mrs. Ralph Pemberton, and Dr. and Mrs. A. W. Phillips.

LIEUTENANT-COLONEL RUBEN A. BOGIA, of Philadelphia, is serving this year as senior medical officer on duty with the Fort Monroe Citizens' Military Camp. His son, Roland, is attending the training camp as a fourth-year candidate. Upon completion of the present encampment, young Bogia will be eligible for graduate work toward a commission as second lieutenant in the Coast Artillery Reserve.

AT THE RECENT MEETING of the American Association for the Study of Goiter, Seattle, Washington, Dr. William F. Rienhoff, Jr., of Johns Hopkins University, Baltimore, received the annual award of $300 for the

best essay dealing with the goiter problem. Drs. O. P. Kimball, of Cleveland; and E. P. and D. R. McCullagh, of the Cleveland Clinic Foundation; and Robert P. Ball, of the University of Louisville, received honorable mention.

THE UNITED STATES PUBLIC HEALTH SERVICE has purchased and is remodeling the four-story brick building at 225 Chestnut Street, Philadelphia, to convert it into a modern dispensary to replace the inadequate quarters now occupied. The new quarters will be equipped with x-ray, physical therapy, dental and laboratory units, and will handle all government cases.

Dr. George L. Collins, senior surgeon in charge, said the new quarters would be equal to any similar government unit in the country.

DR. MAX M. STRAUMIA, of Narberth, an instructor in pathology in the University of Pennsylvania School of Medicine, and laboratory director at Misericordia Hospital, returned home on August 1, having been the first successful climber of the East Ridge of Signalkuppe in the Alps. With three other noted men he has ascended the peaks of eight hitherto unscaled mountains in the Canadian Rockies, all more than 10,000 feet in height. Dr. Straumia has also climbed famous peaks in the Pyrenees and in North Africa.

IN THE AUGUST NUMBER of the JOURNAL, on page 803, at the lower part of the first column, is a reference to a folder, *The 92 Elements,* published by P. C. Kullman & Company, of New York City. We culled the subject matter from a scientific publication. We are in receipt of correspondence from one of our members who wrote to the Kullman Company showing that their attitude in the matter is unethical in its relation to the medical profesion. We regret the publication of this news item.

EVERY PHYSICIAN in the United States and Canada should have received an information card, requesting information for use in the twelfth edition of the *American Medical Directory.* Kindly fill out and return the card promptly regardless of whether or not a change has occurred in the information specified. If the reader should fail to receive a card during the month of August, he will aid by advising the office of the American Medical Association whether any change is to be made in the information to be published in the current issue of the *Directory.*

THE NINETEENTH ANNUAL CONGRESS of the National Safety Council will be held in Pittsburgh, September 29 to October 3. The National Safety Council, like the Red Cross, is a noncommercial, nonpartisan, and coöperative association, with many thousands of members. More than 7000 persons are expected to convene at this Congress. There will be 356 speakers on the program. There will also be an exhibit that will include equipment relating directly and indirectly to the promotion of industrial health activities and the physical efficiency of employees.

DISTRICT ATTORNEY FACH, of Staten Island, announced July 18, he had evidence that between 40 and 50 bodies had been stolen in New York and used to collect death benefits for a ring alleged to have swindled insurance companies out of $5,000,000. He said the conspiracy might be nationwide. The Grand Jury, he asserted, would sit all summer to complete the inquiry. Ten new indictments were returned. Mr. Fach said the body of a man who fell from a tall building was claimed by the conspirators at the morgue, a false name was given the man, a fraudulent insurance policy issued, and a death benefit collected.

THERE WILL BE an international assembly of the Inter-State Postgraduate Medical Association of North America, in Minneapolis, Minn., October 20 to October 24, inclusive. There will be clinical demonstrations, addresses, and scientific demonstrations. Among the speakers on obstetrics will be Dr. Edmund B. Piper, professor of obstetrics, University of Pennsylvania School of Medicine, and Dr. P. Brooke Bland, professor of obstetrics, Jefferson Medical College of Philadelphia. Dr. Fielding O. Lewis, professor of laryngology, Jefferson Medical College of Philadelphia, will address the assembly on "Tonsillectomy—When?" Dr. John B. Deaver, emeritus professor of surgery, University of Pennsylvania School of Medicine, will have charge of a diagnostic surgical clinic, as well as making an address on, "The Treatment of Hernia." This association is devoted exclusively to postgraduate medical education. It exercises no political or legislative duties.

ANY MEMBER OF THE MEDICAL PROFESSION interested in the diagnosis and treatment of lesions of bone is invited to attend a meeting in the ballroom of the Belvedere Hotel, Baltimore, Md., on September 15, 16, and 17, 1930, beginning at 10 a. m., daylight-saving time. Because of the size of the ballroom, the number must be limited to 800. Those who expect to attend should write the Belvedere Hotel and register. Any member of the profession attending this session may register a case of rare lesions of bone difficult to diagnose by addressing Miss Maude Walker, secretary to Dr. Joseph C. Bloodgood, surgical pathological laboratory, Johns Hopkins Hospital. In three sessions of two or two and one half hours each, on three days, with four lanterns, and a very remarkable and educational motion picture, the subject can be given in an almost unforgetable way, and the essentials and fundamentals in the diagnosis and treatment of bone lesions emphasized.

THE UNITED STATES CIVIL SERVICE COMMISSION announces the following open competitive examinations for a biologist, to fill a vacancy in the United States Public Health Service, for duty at Boston, Mass., and throughout the United States. Entrance salaries range from $3800 to $4400 a year; higher-salaried positions are filled through promotion. The duties are to carry on advanced biologic researches, either individually or in coöperation with others, on animal and human materials, etc. Applications must be on file not later than September 17.

Open competitive examinations are also announced for senior and associate medical officer (pathology), salaries ranging from $3200 to $5400 a year. Applications must be on file not later than September 24. Competitors will be rated on their education, training, and experience, and on a thesis or publications.

Full information may be obtained from the Commission, Washington, D. C.

CHARITABLE BEQUESTS are included in the following wills which have been recently probated:

The Jewish Hospital and the Federation of Jewish Charities, Philadelphia, are bequeathed $1000 each under the will of Nelson B. Mayer, formerly of Philadelphia, who died July 25.

An estate of $200,000 was left to the Pennsylvania Hospital, Philadelphia, and the Masonic Home, Elizabeth, by William Snodgrass, a hermit found dead in a cheap hotel.

Temple University Hospital, Wills Eye Hospital, and the Children's Hospital, all of Philadelphia, will receive $300 each from the $53,000 estate of J. Fred Zwirner, of Philadelphia, who died recently.

The following three institutions for negroes share the $6600 estate of Nannie B. Monroe, of Philadelphia: Mercy Hospital, Frederick Douglas Hospital, and Priscilla White Home.

Two bequests of $5000 each to the Woman's Medical College, Philadelphia, were contained in the will of Dr. Henrietta M. Dougherty-Trexler, who died July 24. The bequest is to be known as the Henrietta M. Dougherty-Trexler Fund for research work.

In the will of John Meehan, of Philadelphia, gifts of $5000 each are provided for St. Edmond's Home for Crippled Children, St. John's Orphan Asylum, Catholic Home for Destitute Children, Little Sisters of the Poor, St. Agnes Hospital, St. Joseph's Hospital, Misericordia Hospital, and St. Mary's Hospital. Be-

quests of $4000 each are made to St. Vincent's Orphan Asylum, Archbishop Ryan Memorial Institute for Deaf Mutes, St. Vincent's Hospital for Women and Children, St. Mary's Institute for the Blind, and many others.

BOOK REVIEWS

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

STUDIES IN ETHICS FOR NURSES. By Charlotte A. Aikens, formerly Superintendent of Columbia Hospital, Pittsburgh, and of the Iowa Methodist Hospital, Des Moines; formerly Director of Sibley Memorial Hospital, Washington, D. C. Third edition, thoroughly revised. 12mo of 390 pages. Philadelphia and London: W. B. Saunders Company, 1930. Cloth, $2.50.

A book on this subject could easily defeat its purpose by being too brief or too wordy, by being too superficial or by being too preachy. Miss Aikens' book avoids all four of these pitfalls. With short pithy sentences, sometimes interspersed with questions, she deals in Section I with the ethical problems of the student nurse who is just entering training; in Section II, with the ethics of the nurse who is in actual training; in Section III, with the corresponding problems of the graduate nurse. The style of presentation is adapted not only to individual reading but also to class instruction.

It is unfortunate that this otherwise excellent book is marred by three glaring instances of defective technic in bookwriting. In the chapter on "Old-fashioned Virtues" an excellent little paragraph on certain well-known rules of conduct is entitled "Credulity." The paragraph should be renamed to conform to the title of the chapter. In Chapter XI, on "Ethical Phases of Night Duty," the material of page 128 has no connection with the subject under consideration. This page should have been inserted in a more appropriate place such as in Chapter VI. Chapter XII is a hodgepodge which begins with a discussion of the cost of training a nurse and ends with a discussion of callousness, or the routine spirit. It is doubtful if the financial cost of training has a very great bearing on the ethics of nursing. The first part of this chapter should be entirely rewritten, or else relegated to an appendix, in the interests of unity of composition.

MEDICAL SCHOOLS OF PENNSYLVANIA

The University of Pennsylvania School of Medicine

The most interesting news item concerning the school of medicine of the University of Pennsylvania is the announcement that the University proposes in October of this year to celebrate the recent progress it has made along medical lines. It is planned to hold exercises lasting two days. Prominent scientists will make addresses, among them Sir Arthur Fletcher, secretary of the Medical Research Council of Great Britain, and Professor A. V. Hill, of England. All medical alumni of the University will be invited, and representatives of medical schools, learned societies, etc. The events the University wishes on this occasion to celebrate are among others, the completion of the Maloney Memorial Pavilion, the endowment of the Johnson Department of Medical Physics, and the Robinette Cardiologic Clinic, the recent completion of the Graduate School Hospital, and the Laboratories of Anatomy and Physiological Chemistry of the School of Medicine. Demonstrations and clinics will be held and honorary degrees will be conferred.

There is nothing particularly new to report otherwise concerning the School of Medicine. Again the very large number of applications for admission has made the task of selecting the entering class a very difficult as well as an unpleasant one. Many hundred young men and women have to be refused admission, numbers of them recommended by teachers, friends, and alumni of the University.

Dr. Earl D. Bond has been elected professor of psychiatry, and began his duties on July 1. Through an agreement between the managers of the Pennsylvania Hospital and the trustees of the University of Pennsylvania, the director of the Pennsylvania Hospital Institute for Mental Hygiene and the professor of psychiatry in the Medical School shall be one and the same man. Thus Dr. Bond occupies these two positions. Dr. J. Claxton Gittings has resigned his position as professor of pediatrics, terminating his service the end of June last. His place has not as yet been filled.

The enrollment in the Medical School for the coming session is expected to be about 500, divided as follows: First year 120, second year 105, third year 140, fourth year 135.

The Jefferson Medical College of Philadelphia

At the 105th annual commencement, June 6, 1930, there were 140 in the graduating class, bringing the total number of graduates to 15,333. The members of the graduating class were registered from 30 different states and foreign countries. Fifty-three received commissions as first lieutenants in the Medical Officers' Reserve Corps of the United States Army. This is the eighth group of students to receive army commissions from this college as the result of having satisfactorily completed a course in military science and tactics.

The commencement address was delivered by William Darrach, M.D., dean and professor of clinical surgery, College of Physicians and Surgeons, Columbia University, New York, upon whom was conferred the honorary degree of Doctor of Science. The honorary degree of Doctor of Public Health was conferred upon Andrew A. Cairns, M.D., class of 1887, director of the Department of Public Health, Philadelphia.

There have been thirty-nine promotions of the teaching staff.

The new college building, constructed on a site just west of the old college building at Tenth and Walnut Streets, completely equipped and newly furnished, was occupied on October 7, 1929.

The old college building has been demolished, and upon its former site the Curtis Clinic is under construction, and will constitute an east wing to the present college building.

The new college building was formally dedicated on February 22, 1930, the exercises being held in the Assembly Hall of the College. The dedicatory address was delivered by George B. McClellan, LL.D., professor of economic history, Princeton University, a grandson of the founder of the Jefferson Medical College.

The Smoker and Annual Business Meeting of the Alumni Association were held in the Assembly Hall of the College on the evening of February 22, 1930. It was the largest attended and most successful similar gathering in the history of the Alumni Association of Jefferson Medical College. At the annual business meeting, Dr. Elmer L. Meyers, Wilkes-Barre, Pa., the

(Continued on page xviii.)

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Symbols Used in Index

(C) County Society Report
(E) Editoral
(HA) Hospital Activities
(IM) Industrial Medicine
(JT) Jots and Tittles
(ML) Medicolegal
(PT) Physical Therapy
(PH) Public Health
(S) Secretary's Department

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president, announced the activities of the Association during the past year. He reported that the entire senior class, together with 296 additional graduates, had joined the Alumni Association. At this meeting the Alumni Association presented to the College an oil portrait of Dr. Ross V. Patterson, dean of the College. A portrait of Mr. Alba B. Johnson, president of the board of trustees of the Jefferson Medical College, was presented at the same time.

A bronze tablet has been erected in the college building to record the gift of $100,000 by the Alumni Association as its contribution to the erection of the department of experimental medicine created as a memorial to a member, friend, distinguished surgeon, author, and teacher, Dr. John Chalmers DaCosta, class of 1885, and the establishment of a permanent endowment fund.

Dr. Edward J. Klopp was elected president of the Alumni Association for the ensuing year. Vice-presidents elected were Dr. Elmer H. Funk, Dr. William H. Kraemer, Dr. Clifford B. Lull, and Dr. Louis H. Clerf. Dr. Ross V. Patterson was elected vice-chairman. Other officers elected were Dr. James L. Richards, corresponding secretary; Dr. Carroll R. Mullen, recording secretary; Dr. Harold W. Jones, treasurer.

Registration for the first-year-class, session 1930-1931, was completed on July 1, 1930.

During 1929, 166 graduates of the college appeared before the state boards of 38 different states for examination for licensure. There were no failures.

The total of college endowments for various purposes is now approximately $682,000; and for hospital purposes, in excess of $893,000.

University of Pittsburgh School of Medicine

The commencement of University of Pittsburgh was held on June 11, and 60 students in the school of medicine were graduated.

The registration for the season of 1930-1931 has been closed, the incoming freshmen class having been selected. The total registration in the school of medicine is approximately 260.

The Woman's Medical College of Pennsylvania

June 11 was a significant day for women in medicine, as on that day, alumnæ representing 40 classes returned to their alma mater for the 77th annual commencement. This special enthusiasm was occasioned by the fact that for the first time the commencement exercises were held in the new college building at Henry Avenue and Abbottsford Road, East Falls, Philadelphia. The ceremony of laying the corner stone, presented by the class of 1928, of the new structure was also observed. Prominent among the visiting alumnæ was Dr. Mary Shepherd Danforth of Manchester, N. H., who was a member of the class of 1875 which was present when the corner stone of the present college building on North College Avenue was laid. Dr. Danforth was awarded a gold medal by the president of the college.

Surprise was expressed when the 600 friends of the college and of the 1930 graduating class assembled in the new building and saw how much had been accomplished in 9 short months. The lobby and auditorium were finished even to the hardware and lighting fixtures and the first floor of the hospital which serves the college had been prepared sufficiently so that the corporation's luncheon to the graduating class could be served there. There were 14 graduates, which makes a total

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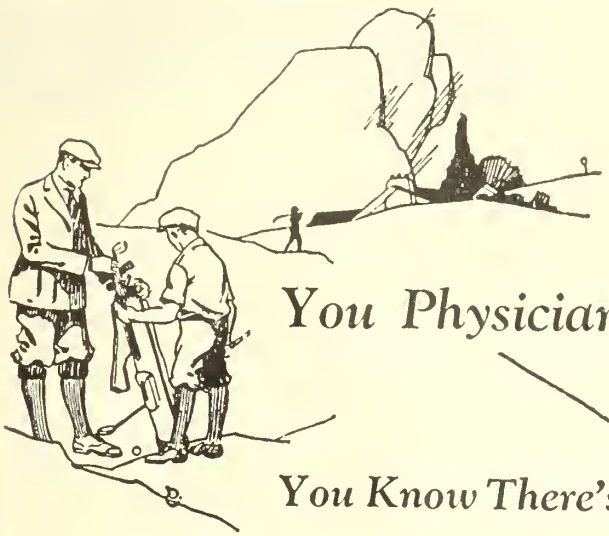

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of 1660 graduates from this medical school. The Hippocratic Oath was read to the class.

Commencement addresses were delivered by Dr. Kate C. Mead, Woman's Medical College '88, and Dr. J. H. Mason Knox, Jr., chief of the bureau of child hygiene, Maryland State Department of Health, and a member of the Johns Hopkins Medical School.

"Women doctors should be recognized by the United States Army with commissions and insignia," said Dr. Mead. "Nurses are recognized by the army and there is no reason why the service should remain closed to women doctors. In this as in other fields of medicine," she continued, "we do not advocate substituting women for men but the union of the two will do much to further the practice of the profession."

The new college will be ready for occupancy on September 24 and as a result of the intensive effort during the month of May to raise $100,000 for new equipment, $60,000 had been secured and the fund is being increased daily.

Preceding commencement day, the faculty gave a dinner to the graduating class.

Sessions of the Alumæ Association, which also made a substantial financial contribution, were held on June 12 and 13. Dr. Frieda Baumann, assistant clinical professor of therapeutics at the college, was elected president of the Alumnæ Association, and Dr. Mary Riggs Noble, chief, division of child health, Pennsylvania State Department of Health, was nominated as the Alumnæ Association's representative on the Board of Corporators for the ensuing two years. The annual alumnæ banquet was held on June 18.

At the annual meeting of the Board of Corporators on June 18, Mrs. James Starr was reëlected president for her ninth consecutive term.

The following faculty changes are announced: Advancements: Dr. Ruth N. Miller, assistant professor of anatomy; Dr. Margaret Sumwalt, assistant professor of physiology; Miss Marjorie Kenyon, assistant professor of physiology; Dr. Florence Polk, associate professor of clinical pathology; Dr. Dorothy Ashton, assistant clinical professor of gynecology; Dr. Emily Lois Van Loon, assistant professor of oto-laryngology and bronchoscopy; Dr. Mollie A. Geiss, associate in pathology; and Dr. Mary Jardine Evans, associate in bacteriology. New appointments: Dr. Roberta Hafkesbring, associate in physiology (from the department at Tulane University); Dr. Marguerite McCarthy, instructor in clinical obstetrics; Miss Alice O. Curwen, instructor in histology and embryology; Dr. Lillian S. Alpers, instructor in clinical medicine; and Dr. Eleanor H. Balph, assistant in clinical obstetrics.

The Temple University School of Medicine

The commencement exercises of the Temple University were held June 19, when 53 were graduated from the School of Medicine. The honorary degree of Master of Science in Nursing Education was awarded posthumously to Miss S. Lillian Clayton.

The Medical Alumni Association of Temple University held its annual dinner on June 18, in the Bellevue-Stratford Hotel. Dr. Joseph Colt Bloodgood, clinical professor of surgery at Johns Hopkins University Medical School, delivered the address of the evening. At the regular business meeting of the Medical Alumni Association held on June 18, the following officers were elected to serve for the ensuing year: Dr. J. Marsh

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(Continued from page xx.)

Alesbury, president; Dr. S. Bruce Greenway, first vice-president; Dr. Valentine M. Hess, second vice-president; and Dr. Charles Q. DeLuca, secretary and treasurer. From June 16 to 18, inclusive, the Medical Alumni Association conducted a postgraduate seminar at the Temple University Hospital.

Registration of the freshman class for the 1930 session was completed June 25, 110 applicants having been matriculated. Beginning with the coming session, the requirements for entrance to the medical school will be advanced to three years of premedical work in lieu of the former two-year requirement.

A new medical school building is nearing completion at Broad and Ontario Streets, directly opposite the Temple University Hospital, and will be ready for occupancy by September 24, 1930. The laying of the corner stone of this building took place on June 18.

During the past year a department of bronchoscopy, neurosurgery, and physical therapy were added to the Temple University Hospital.

The following is a list covering the resignations, advancements, and additions in the major and minor faculties for the past year:

Resignations: Dr. Gustavus C. Bird, professor of roentgenology and radiotherapy; Dr. Max H. Bochroch, professor of neurology; Dr. Simon Ball, clinical assistant in pediatrics; Dr. Richard Argens, clinical assistantship in orthopedics; Dr. Bernard Branley, clinical assistant in medicine; Dr. J. E. Brown, clinical assistantship in orthopedics; Dr. Frank M. Chesner, demonstrator in osteology and syndesmology; Dr. Augustus H. Clagett, instructor in roentgenology; Dr. Jefferson H. Clark, associate in clinical pathology; Dr. G. Morris Elkins, demonstrator in pediatrics; Dr. Nicholas Gotten, associate in neurosurgery; Dr. D. J. Kennedy, clinical assistant in surgery; Dr. G. Widener Knadler, clinical assistant in genito-urinary surgery; Dr. Arthur D. Kurtz, associate professor in orthopedics; Dr. James E. Landis, instructor in rhinolaryngology; Dr. Henry J. Off, professor of otology; Dr. Jules Prevost, lecturer on history of medicine; Dr. Alvin E. Siegel, associate professor in pediatrics; Dr. Jos. P. Tunis, associate professor in histology; Dr. Harry F. Tye, instructor in genito-urinary surgery; Dr. Jos. F. Ulman, associate professor in physical diagnosis; Dr. Herman L. Weiner, clinical assistantship in electro-cardiography; Dr. Luther C. Peter, professor of ophthalmology.

Advancements: Dr. J. Marsh Alesbury, from demonstrator to lecturer in obstetrics; Dr. Allen G. Beckley, from associate professor to clinical professor of medicine; Dr. Louis Cohen, from instructor to associate in diseases of the chest; Dr. J. Howard Frick, from lecturer to associate professor of surgery; Dr. Frank H. Krusen, from demonstrator to associate in medicine and director of physical therapy; Dr. Matthew L. Moore, from clinical assistant to instructor in neurology.

Additions: Dr. Chevalier L. Jackson, professor of bronchoscopy; Dr. Wm. C. Pritchard, professor of histology; Dr. Thos. Klein, professor of applied therapeutics and clinical medicine; Dr. Victor Robinson, professor history of medicine; Dr. Wm. Edward Chamberlain, professor of roentgenology and radiology; Dr. Simon Ball, clinical assistant in laryngology; Dr. Chas. R. Barr, clinical assistant in pathology; Dr. Edward H. Bedrossian, demonstrator in ophthalmology; Dr. Wilbur E. Burnett, lecturer in surgery; Dr. Ed-

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"	J	17%	"	U	13%	"	FF	17%	"	QQ	8%
"	K	16%	"	V	10%	"	GG	14%	"	RR	7%
"	L	15%	"	W	12%	"	HH	13%	"	SS	6%
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(Concluded from page xxii.)

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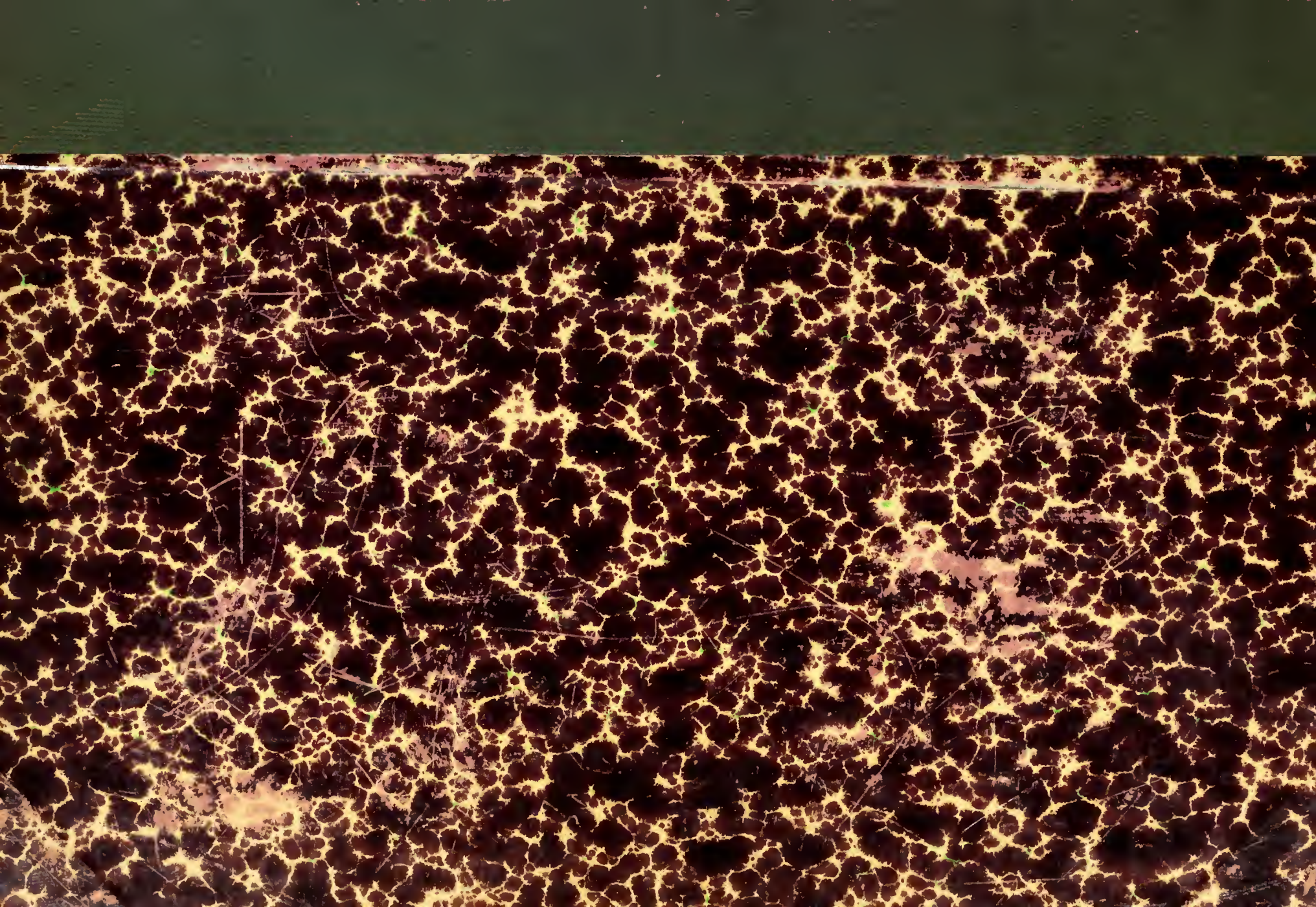
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